

Steel margins to stabilise over H2FY23

- Global majors expect China to play a countercyclical role with its ability to run stimulus and support steel demand
- Construction activity still in expansion mode in the US and Europe and could aid a soft landing for steel consumption in these economies
- Maintain our constructive view on India's steel sector; prefer defensive play TATA (BUY, TP Rs 140) amid the current volatile environment

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China's countercyclical role could support steel margins: Global and Chinese steel majors such as AMNS, Baosteel, BHP, RIO, etc expect recovery in steel demand from the October-December quarter and through CY23. Covid lockdowns are regarded as a timing risk rather than stability risk. Players believe recovery is already underway in infrastructure and auto and do not expect housing to face a hard landing. [China's Q2 steel results signal slower demand recovery](#).

Slowdown outside China softened by construction activity: For the US, although steel production and imports have started moderating, construction activity starts clocked a 14-year high in July with a growing pipeline of non-residential projects. Even so, we could see reduced activity in CY23 as a weaker economy and rising interest rates erode business confidence. Eurofer forecasts only a moderate recession in steel demand for Europe (-1.7% in CY22) amid a declining trend for the rest of CY22. However, it still expects modest growth in the output of steel-using sectors (+1.1%) on the back of supportive construction policy.

Global iron ore to turn surplus in H2CY22, coking coal to ease over CY23: With a slowdown in steel production and seasonal supply growth, the global iron ore market is likely to turn into surplus in H2CY22. In contrast, we expect tightness in the coking coal market to ease only gradually over CY23 as supply is restored to CY19 levels.

Global metals majors not deterred by downturn: While these are still early days, on-track capex plans and dividend payouts from global majors reflect their confidence in being able to work through the downturn without a material balance sheet impact.

Maintain constructive view on India's steel sector: We expect steel margins to stabilise to mid-cycle levels over H2FY23 and look beyond the ongoing volatility to focus on FY23-FY26 earnings growth from brownfield capacity expansion and margin enhancements. We prefer defensive play TATA (BUY, TP Rs 140) amongst our steel coverage for its ability to generate sector-leading margins. We also have a BUY on JSP (TP Rs 460) which has scope for a gradual rerating as the company demonstrates capital discipline and delivers on the next wave of growth.

Recommendation snapshot

Ticker	Price	Target	Rating
JSP IN	448	460	BUY
JSTL IN	691	655	HOLD
SAIL IN	84	90	HOLD
TATA IN	108	140	BUY

Price & Target in Rupees | Price as of 13 Sep 2022



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Global steel sector roundup

In our periodic roundup, we summarise key takeaways from recent data releases and reports on the ferrous sector across China, Europe, Asia and other global markets. We include inputs from associations and consultants such as Eurofer (European Steel Association), AISI (American Iron and Steel Institute), CRU, and Wood Mackenzie. In addition, we present insights from the latest results of global majors, including Anglo American, BHP, FMG, Nucor, Rio Tinto, Teck Resources, and Vale.

Global majors expect China to play a countercyclical role

In their Apr-Jun'22 earnings commentary, global steel majors expect an improving trend in China's steel market as a pro-growth policy stance takes hold, and see lockdowns as a timing rather than stability risk. Rio Tinto highlighted that China has more room to maintain a supportive policy stance and has the ability to introduce further easing measures to promote growth with modest inflationary pressures. In fact, Rio Tinto believes the mining industry is at an advantage over other industries considering China's oversized role in global commodity demand.

In terms of timing of the recovery, ArcelorMittal (AMNS) anticipates onset in the October-December quarter, continuing through CY23. Vale cited the typically 'golden' month of September that sees the recommencement of downstream demand and also expects a construction surge supported by China's infrastructure push. Vale mentioned that China could clock 6% YoY GDP growth in H2CY22 as per its channel checks.

Recovery underway in infrastructure and auto

Global players highlighted that recovery is already underway in China's infrastructure and auto segments, and do not expect housing to face a hard landing:

- **Recovery in infrastructure and auto:** BHP pointed out that China's infrastructure (9.2% YoY growth in June YTD vs. 0.2-3.4% growth over CY18-CY21) and auto (supported by time-limited tax incentives over Jun-Dec'22) sectors have already been showing signs of revival. Vale believes that infrastructure investment could restart by the year-end.
- **Housing unlikely to have a hard landing:** Vale expects the Chinese government to manage a soft landing for the property sector. BHP indicated that the scaled-back inventory of unsold dwellings is already close to historical lows and believes that the risks to housing prices are not skewed to the downside despite supply-side challenges for the industry.

Gradual steel demand recovery seen from Q4CY22

China's steel majors have highlighted a challenging environment through H2CY22 given weaker domestic demand and declining profitability. Management commentary suggests that the easing of Covid-led restrictions and revival in infrastructure demand as the stimulus feeds through the economy could aid demand recovery by the year-end. While Baosteel expects real estate demand to remain anaemic, it highlights strong demand from the transformer segment, recovery underway in auto and a gradual rise in infrastructure offtake over H2CY22.

We believe these segments have the potential to partly offset the weakness in real estate and to arrest the decline in Chinese steel demand to lower single digits. With real estate demand failing to gain traction, it is imperative that the Chinese steel industry align production with underlying demand. For details, see our report of 5 Sep 2022: [China’s Q2 steel results signal slower demand recovery](#).

BHP remains bullish on China in medium term

BHP firmly believes that China will almost double its accumulated stock of steel in use (currently 7-8 tonnes per capita), on its way to an urbanisation rate of ~80% and living standards around two-thirds of those in the US. The company’s base case remains that Chinese steel production is in a plateau phase in the current half decade. This is even after noting the change in China’s policy stance to “net reduction” from “zero growth”.

Construction growth easing slowdown outside China

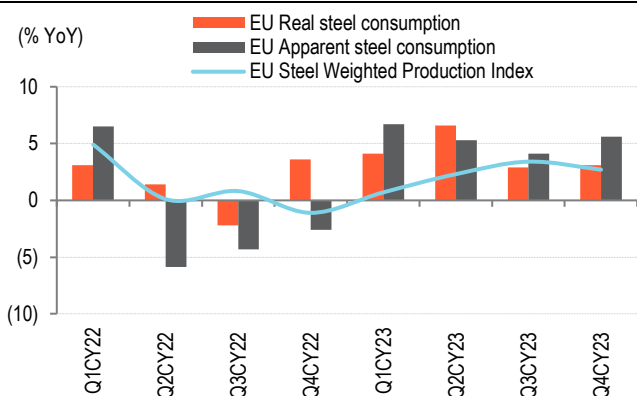
In its earnings call, BHP acknowledged deteriorating trends outside China. The company expects the US to avoid recession, Europe to face a moderate impact and the developing world to slow down.

Europe – Moderate recession forecast by local association

European steel association Eurofer expects apparent steel consumption to experience its third recession in just four years, in its latest outlook published on 25 August. At this stage, the association expects a moderate recession (-1.7%) with a declining trend for the rest of CY22. Eurofer expects YoY growth in real steel consumption (end-use) and still believes output of steel-using sectors will grow on an annual basis in CY22. However, it has halved its growth forecast from the previous outlook in May’22 (to 1.1% vs. 2%).

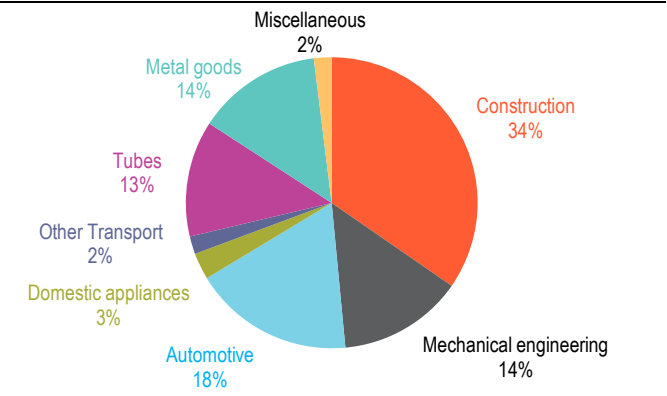
For CY23, Eurofer expects steel-using sectors’ output to accelerate moderately to 2.2% with recovery in apparent steel consumption to 5.6%. However, the evolution of steel demand remains subject to high uncertainty at least until Q1CY23, conditional upon developments related to the energy crisis, inflation, supply chain disruptions and the Russia-Ukraine war.

Fig 1 – EU steel consumption growth



Source: Eurofer, BOBCAPS Research

Fig 2 – Steel consumption mix

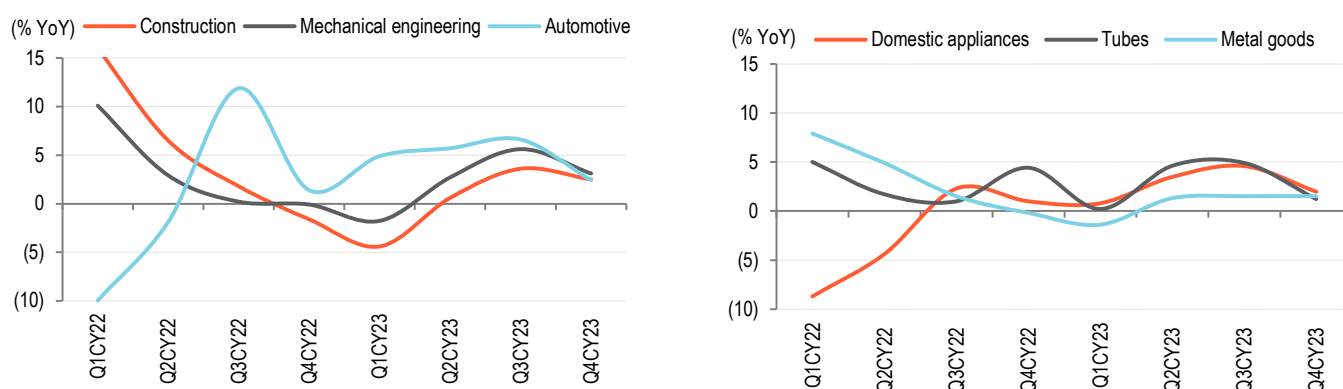


Source: Eurofer, BOBCAPS Research

Outlook for key sectors

- **Slower growth in construction:** Per Eurofer, overall construction activity in Europe would continue to grow – albeit at a lower rate – due to government housing support schemes, with incentives for renovations to make buildings more energy efficient, public construction schemes and EU-wide public policies such as NextGenerationEU. Non-residential construction has been impacted the most by the pandemic and a subdued business outlook. While the housing market is currently robust, monetary tightening and general inflation is expected to cause a slowdown in CY23.
- **Auto still facing difficulties:** CY22 looks like another difficult year for the European auto sector with improvement contingent upon a revival in macroeconomic outlook and consumer disposable income.
- **Mechanical engineering outlook worsening:** Given its strong reliance on export markets, the outlook for the mechanical engineering sector has been rapidly changing for the worse.

Fig 3 – Output growth of key steel consuming sectors



Source: Eurofer, BOBCAPS Research

US – Steel supply moderating but construction activity strong

- **Moderating steel supply:** US imports and domestic shipments are on the decline, reflects concerns over the upcoming slowdown.
 - **US imports likely to decline MoM again in Aug...:** US steel import permit applications totalled 2.4mt in August, down 7.2% from July import levels. The finished steel component at 2.1mt was also down 9.3% from July import levels as per data from Steel Import Monitoring and Analysis (SIMA). Finished steel market share is estimated at 23% in August as per AISI.
 - **... after a decline in July:** While US steel imports at 2.7mt were down 5.7% MoM in July, finished steel at 2.3mt was up 2.1% MoM. Total and finished steel imports rose 10.4% and 31.8% respectively, year-to-date vs. CY21, per AISI.
 - **Domestic shipments also eased:** US steel mill shipment at 7.7mt was down 7.3% YoY but up 0.9% MoM. YTD (July) shipments at 53.6mt fell 1.1% YoY.

- **Non-residential building project pipeline strong:** Dodge Economists consider July and August data as a sign of continued confidence from owners and developers that non-residential building projects will be realised in the coming year. For this to continue it is essential that inflation is mitigated successfully without resulting in recession and there is a decreased impact of pandemic shutdown. However, activity levels could reduce in CY23 as weaker economic conditions and rising interest rates may grind down overall consumer and business confidence.
- **Construction momentum intact in August...:** The Dodge Momentum Index (DMI), a monthly measure of projects under planning and a lead indicator for construction spending almost by a year, ticked down modestly by 1.2% in August to 171.9 from July's 14-year high.
- **...after a 14-year high in July:** Total construction starts (residential + non-residential) rose 48% YoY in July to a seasonally adjusted annual rate of US\$ 1.36tn as per Dodge Construction Network. The increase was attributable to the start of three large manufacturing plants and two LNG export facilities. Even excluding these projects, construction starts would have been up 7% YoY. This was driven by a 79% YoY increase in non-residential building and 120% YoY increase in nonbuilding starts, offsetting an 8% decline in residential starts.
- **Infrastructure to extend support into CY23:** The industrial economy will get another boost from US\$ 1.2tn under the Infrastructure Investment and Jobs Act. Around half of the spending will go towards building new roads, bridges and other infrastructure projects. However, it could be another six months for this to drive new steel demand.
- **Residential pipeline has started to taper after a strong CY21:** Residential starts declined 8% YoY in July, reflecting the impact of higher mortgage rates. This compares with 1% YoY growth over Jan-Jul'22 and 4% YoY over Jun-Jul'22.

US major Nucor sees resilient demand across major end-use markets

US steel major Nucor had annual shipments of 25.7mt in CY21. Nucor's Q2CY22 commentary suggests stable and resilient demand across major end-use markets. The company sees non-residential construction as one of the most resilient markets and anticipates improving demand from infrastructure from the CY22 package. It also continues to see strong consumer appetite for automobiles and highlights the possibility of a ramp-up in auto production run-rate to 17mn vehicles if a solution to the chip shortage is found. The company also expects demand improvement from offshore wind and other renewables.

Nucor highlighted that its current order backlog is 30-50% higher than the average backlog it had in 2015. As an example, while the company expects a 19% YoY reduction in warehousing space in CY23, the forecast is still 60% higher than that in 2018, which indicates the overall market is quite strong.

Stable H2CY22 outlook

- **Steel demand to be stable outside Europe, spreads to normalise:** AMNS expects volumes to be relatively stable in H2CY22 except for Europe. While AMNS highlighted possibility of improvement in automotive demand in H2 if the sector is able to resolve its supply issues, Eurofer expects the difficulty to continue for the sector. The company expects normalisation of spreads as it works through inventories and as correction in raw material prices passes through its cost base. It does not expect structurally higher exports out of China.
- **Steel production to follow demand:** While AMNS does not provide annual guidance, it will align its production with underlying demand, ensuring no build-up of inventory. Although Europe faces energy cost risk (33% of European footprint vulnerable to gas supply issues), AMNS has the flexibility to move production around with multi-site, multi-country operations.
- **Iron ore order book points to stable outlook for Q3 but concerns for Q4:** Vale is fully sold out in Europe for Q3CY22 and has not seen the impact of an impending recession yet. It expressed concerns on sale volumes to Europe for Q4 due to higher energy costs. Vale indicated that South East Asian demand has been stable and is positive about H2 demand from China given modest inventory levels in the country and potential demand pickup.

Global steel majors not deterred by downturn

The capex plans and payouts from global majors do not suggest any concerns over the impending economic downturn. While these are still early days, we view this as a sign of confidence in their ability to work through the downturn without material impact on the balance sheet. Even as it acknowledged economic headwinds and weaker sentiment, companies like AMNS stressed on the positive long-term fundamental outlook for steel.

- **Majors have not made any material change to capex guidance** in the latest earnings announcement. Rio Tinto explicitly stated that it does not want to alter its investment plan even in the event of a recession as it believes it has planned the right investment profile keeping the business cycle in mind.
 - AMNS has marginally lowered capex to US\$ 4.2bn (from US\$ 4.5bn) for CY22. This still implies a sharp HoH increase to US\$ 3bn in H2. The company has also gone ahead with the US\$ 2.2bn acquisition of CSP in Brazil.
 - BHP's new capex guidance for FY23 (Y/E Jun) at US\$ 7.6bn was higher than its spend of US\$ 6.1bn in FY22 for continuing operations.
 - Rio Tinto has marginally lowered CY22 capex to US\$ 7.5bn (from US\$ 8.0bn) on a stronger dollar and rephasing of investment, but retained its FY23-FY24 guidance at ~US\$ 9bn-10bn with an ambition to invest US\$ 3bn in growth.
 - FMG's new capex guidance for FY23 (Y/E Jun) at US\$ 2.7bn-3.1bn compares well with actual spend of US\$ 3.1bn in FY22 for continuing operations. This includes US\$ 0.7bn-0.8bn on major projects including Iron Bridge and PEC.

- **Majors have also continued with high payouts** in line with their earnings generation. AMNS stated that volatility in cash generation has always been lower than volatility in earnings with working capital built up during an upcycle and released during a downcycle.
 - AMNS announced a new US\$ 1.4bn buyback, bringing its total buyback announcements to US\$ 3.4bn.
 - BHP continued its high dividend payout at US\$ 8.9bn in Q4FY22, which was US\$ 3bn higher than its policy of a 50% payout. In all, it paid US\$ 36bn over FY22 (Y/E Jun).
 - Rio Tinto also paid out its second highest interim dividend ever at US\$ 4.3bn in Q2CY22 following its policy of 50% payout.

Seaborne iron ore market may turn into surplus

Seaborne iron ore supply contracted in H1CY22 due to a 40mt reduction in CIS supply due to the ongoing war and India exiting the market after the imposition of export duty in May'22. Aggregate shipments of major low-cost producers remained flat YoY in H1.

Looking to Q3CY22, Vale expects the market to remain balanced. BHP expects improvement in operational performance by seaborne majors and a pickup in availability of ferrous scrap over Jul-Jun'23. This together with pullback in iron ore demand outside China is likely to turn the market into surplus as per BHP. Vale currently sees strong support for pellets given their increased use in direct reduction owing to higher thermal coal prices.

Iron ore supply to improve seasonally in H2

- BHP is not planning any material increase in iron ore supply from Australia over FY23 (Y/E Jun) with a guidance range of -2% to +3% YoY.
- FMG's new FY23 (Y/E Jun) shipment guidance at 187-192mt suggests only a marginal improvement over the 189mt in FY22.
- Rio Tinto maintained iron ore supply guidance at 320-335mt in CY22 despite challenges in H1 (154mt, -2% YoY). This implies a sequential improvement of 18-33mt HoH to 169-184mt in H2. The company has delivered first ore at Gudai-Darri mine and its ramp-up is pivotal to delivering on the guidance.
- Vale lowered CY22 guidance to 310-320mt from 320-335mt, attributing most of the cut to its 'value over volume' strategy (only 3.5mt reduction due to sale of one system). Despite this cut, Brazilian iron ore supply will improve by 36-46mt seasonally to 173-183mt in H2CY22. Vale's 400-450mt ambition is unlikely to be delivered in the medium term and will come through only when the market needs lower grade iron ore. Vale also clarified that it is looking at 450mt of capacity to deliver 400mt on a reliable basis as and when needed.

Coking coal market to ease only gradually over CY23

Coking coal prices had eased over June/July with the easing of supply disruptions and softening of ex-China demand. Recovery was particularly seen in Mongolian supply with truck flow surpassing 500 per day (compares with an average of 720 trucks per day in CY19). With a more intense focus on domestic supply security, China has changed its approach to suspending only “guilty” mines in the wake of serious safety incidents, but allowing neighbours to operate. The change has contributed to 2% YoY improvement in domestic hard coking coal output in China till Jun YTD.

Coking coal prices subsequently tightened above US\$ 300/t by the end of August and again eased to US\$ 265/t. BHP points out that the coking coal exporter industry still faces a difficult and uncertain period ahead while natural trade flows are inhibited. However, media reports suggest that China is considering an end to the ban after the change in Australia’s government in May’22. The centre-left Australian Labour Party has taken over the reins from the conservative Liberal-National coalition.

Teck Resources has highlighted tightness for coking coal markets by comparing demand vs. supply with the more stable situation in CY19. While crude steel production and hot metal production are still running 70mt and 50mt higher respectively, coking coal export supply is down 31mt vs. CY19. Hence, availability continues to be tight despite the demand slowdown on the steel side. Teck Resources believes that prices will move up again when demand improves. The market is likely to remain tight till volume ramp-up is delivered in CY23.

Coking coal supply challenges continue

- BHP aims to revive coking coal production to FY21 levels, guiding for 0-10% YoY growth in FY23 (Y/E Jun), after a 9% YoY decline in FY22 to 58mt (64mt in FY21). However, a wider guidance range indicates significant uncertainty associated with the ramp-up of disrupted volumes. BHP also expressed its concerns over increased royalties.
- The Australian Bureau of Meteorology (BoM) has upgraded its La Nina watch for CY22-CY23 to an alert, increasing the probability of another wet year to 70% from 50%. This will be the third La Nina weather trend in a row, increasing the chances of above-average rainfall across already saturated ground and filled water storage in east and north Australia.
- Teck Resources lowered its CY22 coking coal production guidance by 1.0-1.5mt to 23.5-24.0mt due to plant reliability, increased absenteeism and labour shortages.

Energy coal prices to remain high

We summarise key takeaways from the Global Coal Forum by Wood Mackenzie.

- Energy coal prices are likely to remain elevated while sanctions continue on Russian coal which accounted for a quarter of the high-energy coal in the global market. Although Russian coal has been flowing into markets that usually did not take high-energy coal, Europe and North Asia remain short of premium coal.
- Though energy insecurity is accelerating energy transition in Europe, it has increased coal-dependency for Asian countries.
- High coal prices have not accelerated investments in coal. Wood Mackenzie believes that capital investment in coal ex-China could fall nearly 20% in CY22. Although Australia may accelerate coal projects, most miners are focusing on repayment of debt, return of capital to shareholders or diversification options.

Maintain positive sector view

Price forecasts

We expect steel margins to stabilise at mid-cycle levels over H2FY23 and assume to hold at these levels through FY25.

Fig 4 – Price forecasts

	FY19	FY20	FY21	FY22	FY23E	FY24E	FY25E
USDINR exchange rate	69.9	70.9	74.2	74.5	79.2	81.0	82.6
Steel prices							
China HRC Export (US\$/t)	555	491	539	868	670	593	563
India HRC (US\$/t equ)	637	537	602	891	746	642	612
YoY Change (%)	1.5	(15.7)	12.0	48.1	(16.3)	(13.9)	(4.7)
India HRC (Rs'000/t)	44.6	38.0	44.6	66.4	59.0	52.0	49.8
YoY Change (%)	10.1	(14.6)	17.1	49.0	(11.2)	(11.8)	(4.2)
India Rrebar (Rs'000/t)	42.6	38.2	42.6	56.3	55.7	49.5	47.3
YoY Change (%)	16.9	(10.4)	11.6	32.1	(1.0)	(11.2)	(4.4)
Raw material prices							
Iron ore CFR China (US\$/t)	68	91	123	148	120	118	110
Iron ore India indicator (Rs'000/t)	3.4	3.4	3.9	6.8	5.0	5.0	4.7
Coking Coal Australia FOB (US\$/t)	214	178	135	334	311	206	175
Gross margin indicator							
China (US\$/t)	290	199	205	364	245	233	226
India (US\$/t equ)	355	280	368	447	368	346	331
India (Rs'000/t)	24.8	19.9	27.2	33.3	29.1	28.0	27.0

Source: Bloomberg, BOBCAPS Research

Constructive view on Indian steel sector

We remain constructive on India's steel sector as we expect margins to stabilise to mid-cycle levels over H2FY23 and look beyond the ongoing volatility to focus on FY23-FY26 earnings growth from brownfield capacity expansion and margin enhancements. We prefer defensive play TATA (BUY, TP Rs 140) amongst our steel coverage for its ability to generate sector-leading margins. TATA's growth ambitions are also fructifying in the form of the upcoming NINL expansion. We also have a BUY on JSP (TP Rs 460) which has scope for a gradual rerating as the company demonstrates capital discipline and delivers on the next wave of growth

Fig 5 – Peer comparison

Ticker	CMP (Rs)	Rating	Target price (Rs)	Upside (%)	EV/Sales (x)		EV/EBITDA (x)		Net income (Rs bn)		P/B (x)		P/E (x)	
					FY23E	FY24E	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
TATA IN	108	BUY	140	29.9	0.8	0.9	4.2	4.3	221	190	1.1	0.9	5.9	6.9
JSTL IN	687	HOLD	655	(4.6)	1.4	1.4	7.9	6.0	122	175	2.5	1.8	13.6	9.5
JSP IN	441	BUY	460	4.2	1.0	1.0	4.7	4.2	53	59	1.3	1.0	8.6	7.6
SAIL IN	83	HOLD	90	8.1	0.5	0.5	4.4	3.4	49	67	0.6	0.6	7.0	5.2

Source: BOBCAPS Research

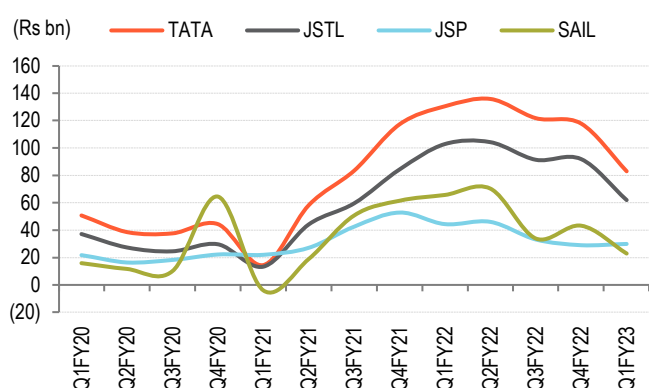
Fig 6 – Earnings forecasts

(Rs bn)	BOBCAPS				Consensus			Delta to Consensus		
	FY22	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E	FY23E	FY24E	FY25E
Revenue										
JSP	511	502	491	549	498	490	555	0.8	0.3	(1.1)
JSTL	1,464	1,618	1,559	1,671	1,501	1,562	1,569	7.8	(0.2)	6.5
SAIL	1,035	1,024	952	952	971	953	883	5.4	(0.1)	7.8
TATA	2,423	2,278	1,975	1,988	2,245	2,130	2,239	1.5	(7.3)	(11.2)
Aggregate	4,922	4,920	4,487	4,610	4,717	4,646	4,690	4.3	(3.4)	(1.7)
YoY growth (%)		0.0	(8.8)	2.8	(4.5)	(1.5)	1.0	-	-	-
EBITDA										
JSP	155	107	115	130	102	108	119	4.5	6.8	9.3
JSTL	390	282	360	403	268	332	334	5.5	8.5	20.6
SAIL	213	114	135	145	108	110	119	5.6	23.5	21.9
TATA	635	432	400	427	429	383	398	0.7	4.4	7.1
Aggregate	1,238	829	895	975	805	825	851	3.0	8.6	14.5
YoY growth (%)		(33.1)	8.1	8.8	(35.0)	2.5	3.2	-	-	-
Net income adjusted										
JSP	83	53	59	71	49	54	62	7.8	9.2	13.5
JSTL	197	122	175	209	104	145	150	17.0	20.9	39.4
SAIL	122	49	67	74	72	66	34	(31.8)	0.9	118.3
TATA	402	221	190	204	215	181	204	2.7	5.0	(0.2)
Aggregate	721	393	431	487	392	392	388	0.2	10.2	25.5
YoY growth (%)		(45.6)	9.8	12.8	(46.7)	(0.1)	(1.0)	-	-	-

Source: Company, Bloomberg, BOBCAPS Research

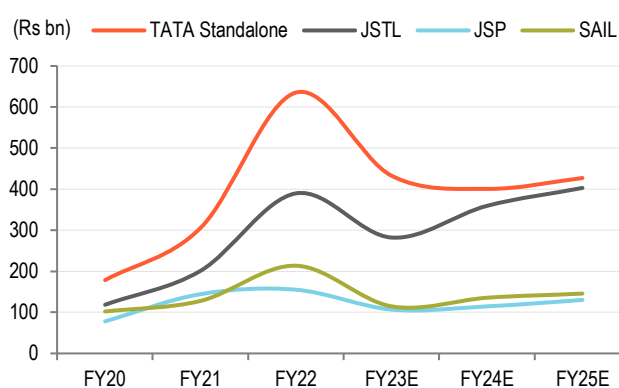
Key forecast drivers

Fig 7 – Consolidated EBITDA (quarterly)



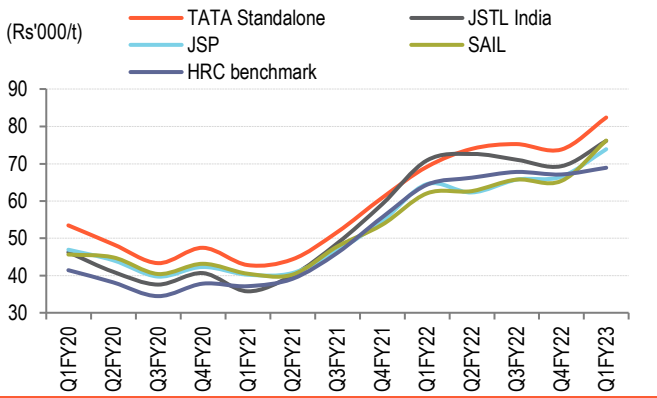
Source: Company, BOBCAPS Research

Fig 8 – Consolidated EBITDA (annual)



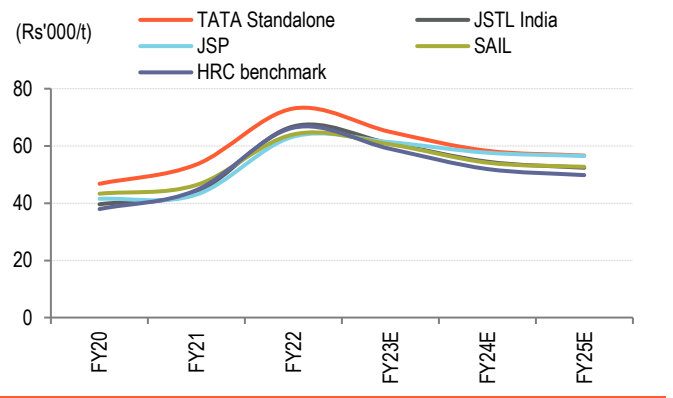
Source: Company, BOBCAPS Research

Fig 9 – Realisation (quarterly)



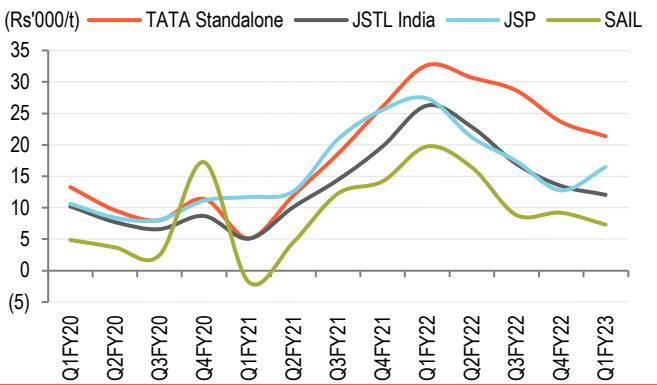
Source: Company, BOBCAPS Research

Fig 10 – Realisation (annual)



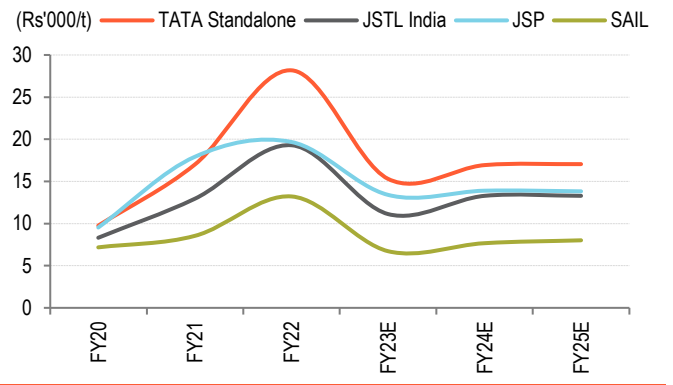
Source: Company, BOBCAPS Research

Fig 11 – EBITDA per tonne (quarterly)



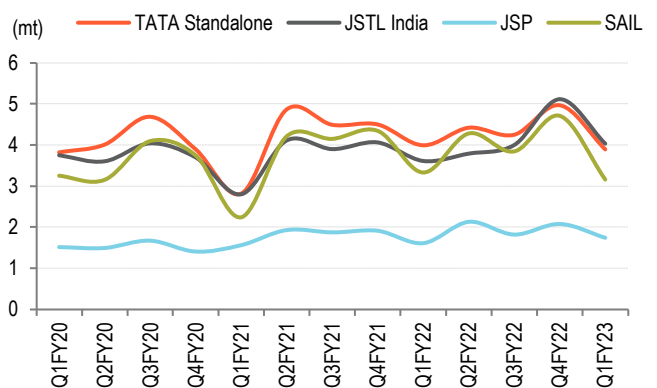
Source: Company, BOBCAPS Research

Fig 12 – EBITDA per tonne (annual)



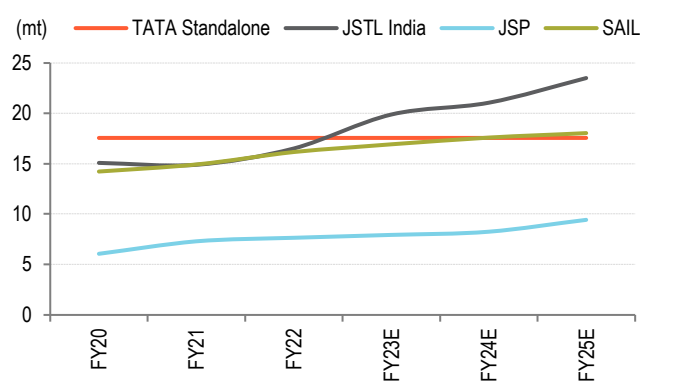
Source: Company, BOBCAPS Research

Fig 13 – Sales (quarterly)



Source: Company, BOBCAPS Research

Fig 14 – Sales (annual)

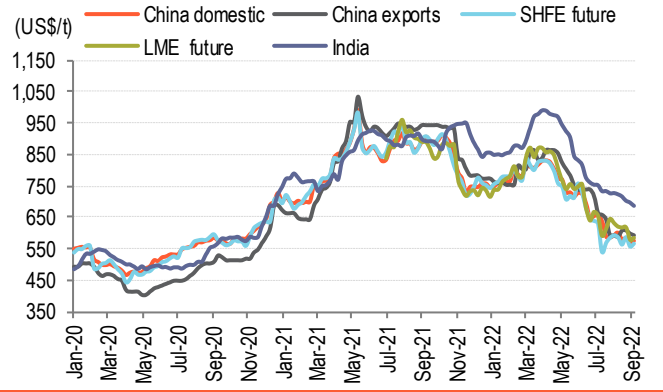


Source: Company, BOBCAPS Research



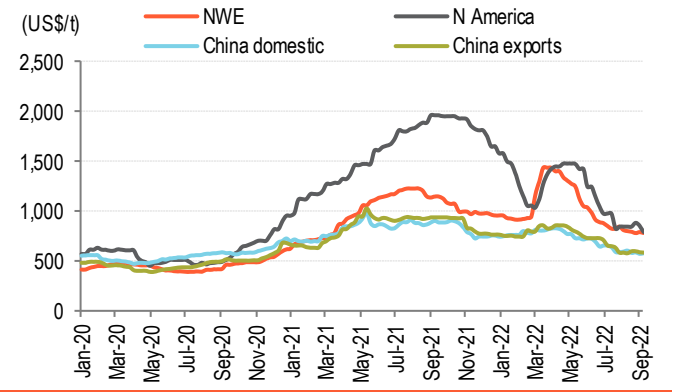
Prices

Fig 15 – HRC steel prices (China and India)



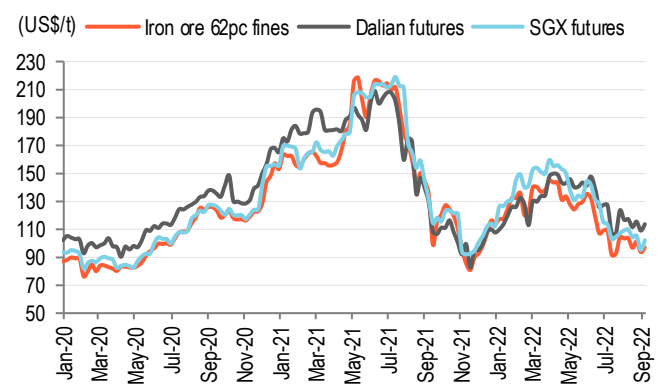
Source: Bloomberg, BOBCAPS Research

Fig 16 – Regional HRC steel prices



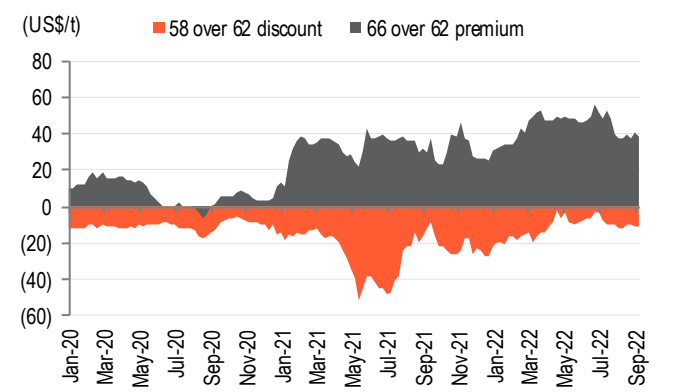
Source: Bloomberg, BOBCAPS Research

Fig 17 – Iron ore prices



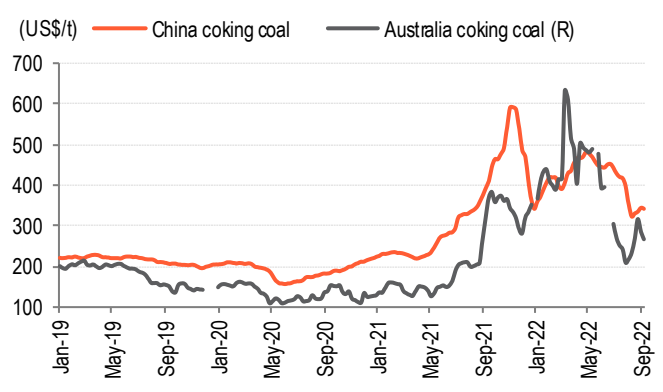
Source: Bloomberg, BOBCAPS Research

Fig 18 – Iron ore grade premium/discount



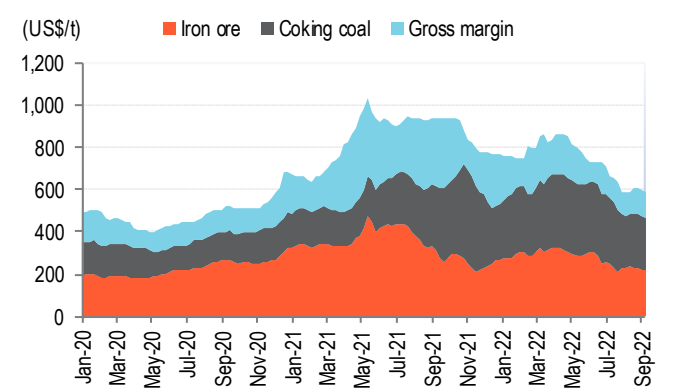
Source: Bloomberg, BOBCAPS Research

Fig 19 – Coking coal prices



Source: Bloomberg, BOBCAPS Research

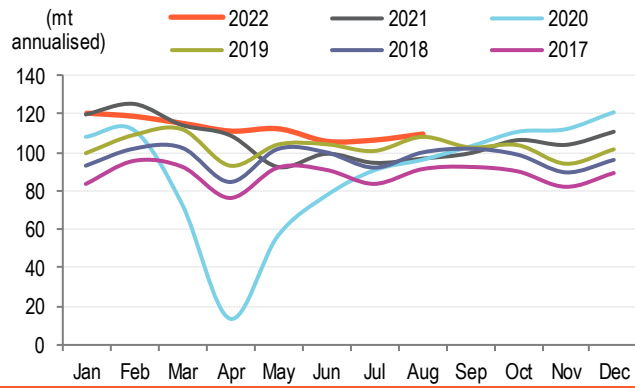
Fig 20 – China HRC gross margin proxy (on export price)



Source: Bloomberg, BOBCAPS Research

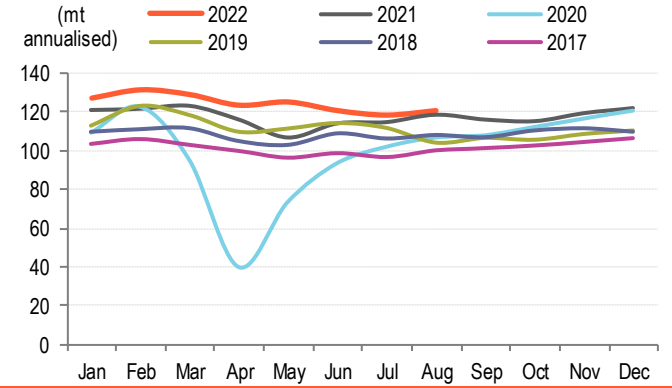
India steel demand supply and prices

Fig 21 – India steel consumption



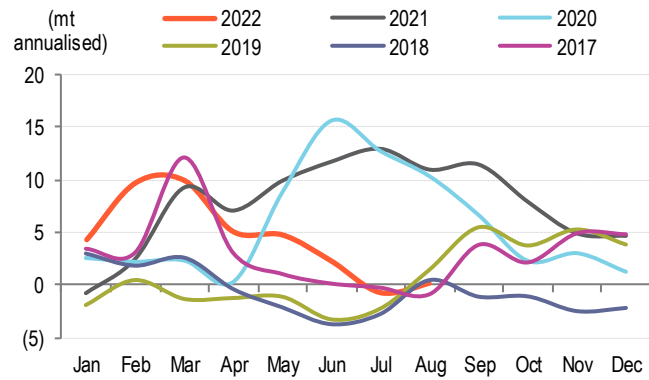
Source: CMIE, BOBCAPS Research

Fig 22 – India steel production



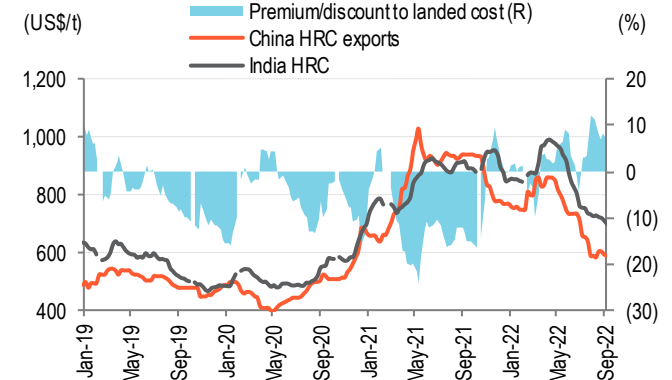
Source: CMIE, BOBCAPS Research

Fig 23 – India steel exports



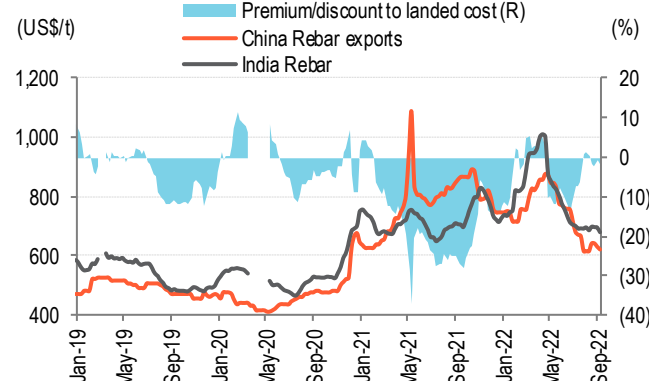
Source: CMIE, BOBCAPS Research

Fig 24 – India HRC premium/discount



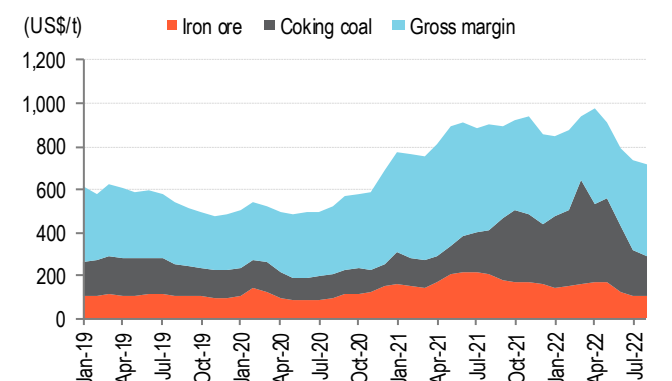
Source: Bloomberg, CMIE, BOBCAPS Research

Fig 25 – India rebar premium/discount



Source: Bloomberg, Steelmint, BOBCAPS Research

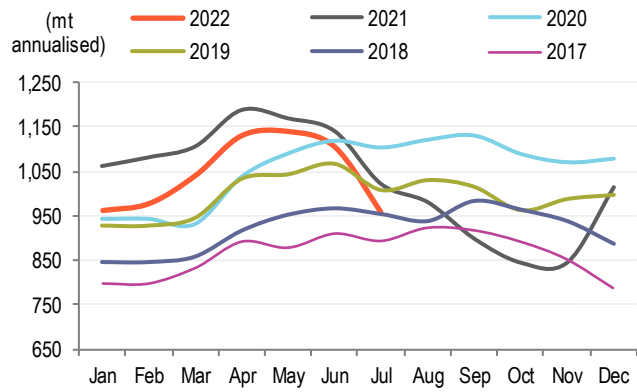
Fig 26 – India HRC gross margin proxy (monthly)



Source: Bloomberg, CMIE, Steelmint, BOBCAPS Research

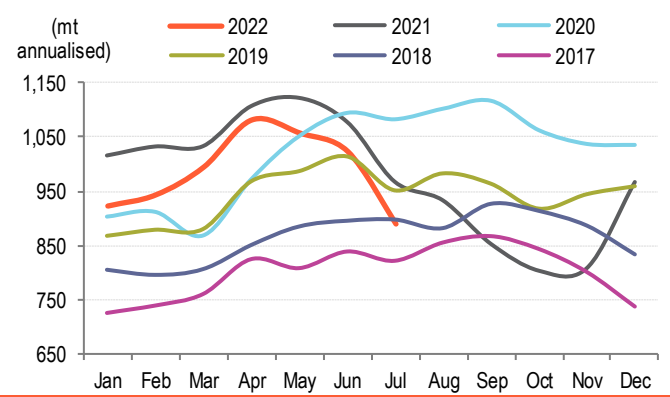
China steel production and consumption

Fig 27 – China steel production



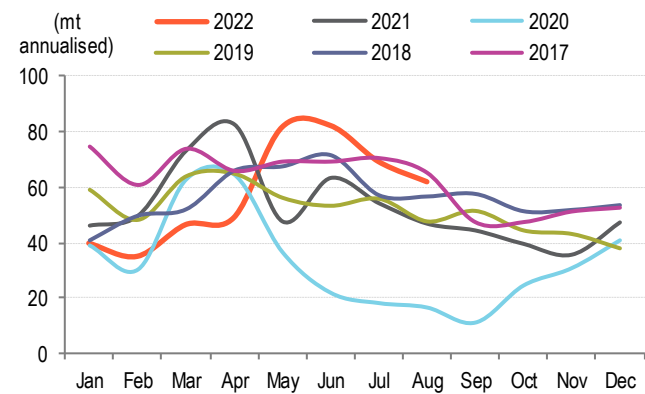
Source: Bloomberg, China National Bureau of Statistics, BOBCAPS Research

Fig 28 – China steel apparent consumption



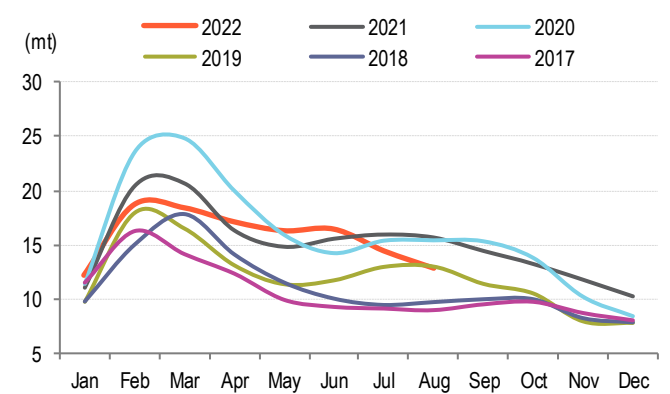
Source: Bloomberg, China Customs, China National Bureau of Statistics, BOBCAPS Research

Fig 29 – China steel net exports



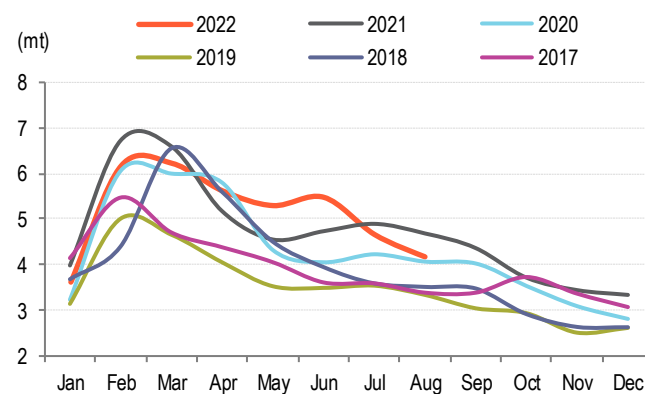
Source: Bloomberg, China Customs, BOBCAPS Research

Fig 30 – China steel inventory for marketplace



Source: Antaike, Bloomberg, BOBCAPS Research

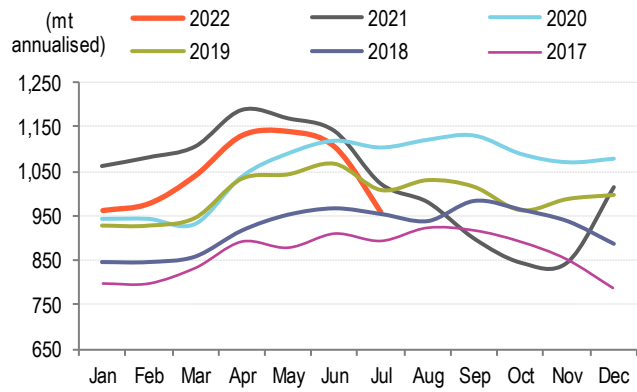
Fig 31 – China steel inventory of traders



Source: Bloomberg, Steelhome, BOBCAPS Research

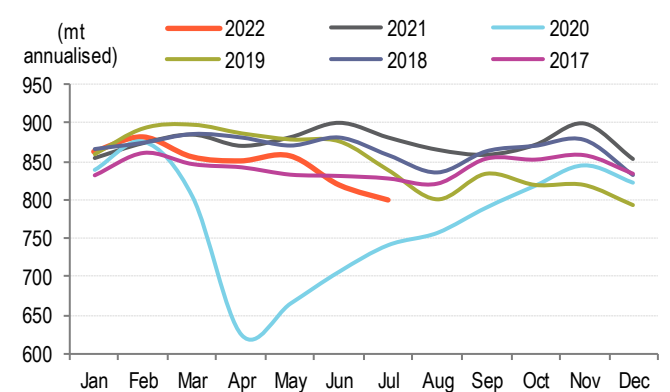
World steel production

Fig 32 – China production



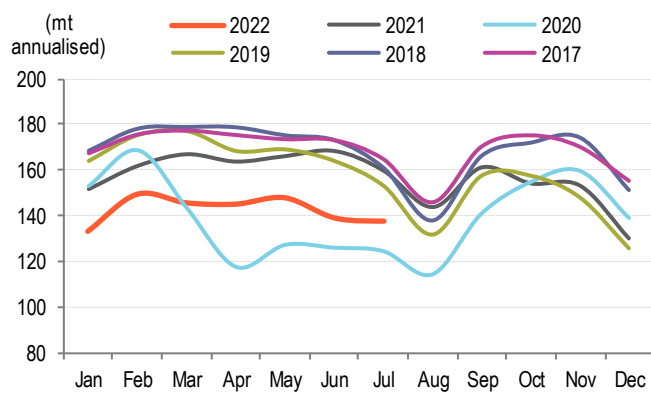
Source: Bloomberg, China National Bureau of Statistics, BOBCAPS Research

Fig 33 – Ex-China production



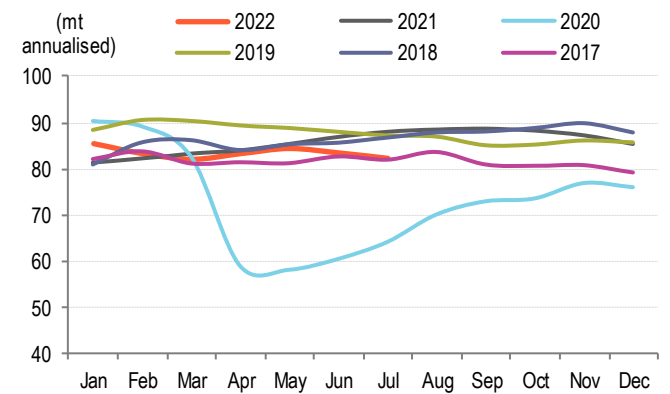
Source: Bloomberg, World Steel Association, BOBCAPS Research

Fig 34 – EU production



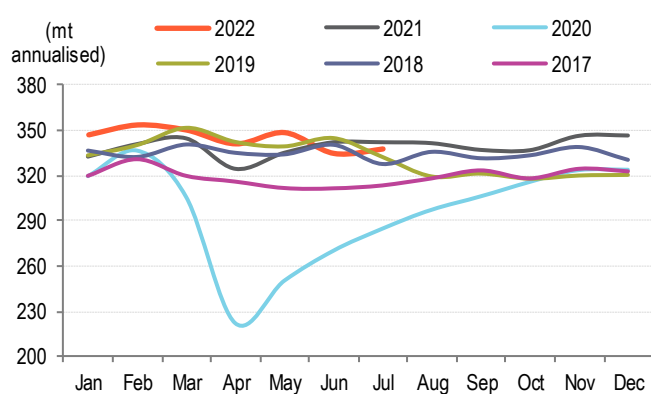
Source: Bloomberg, World Steel Association, BOBCAPS Research

Fig 35 – US production



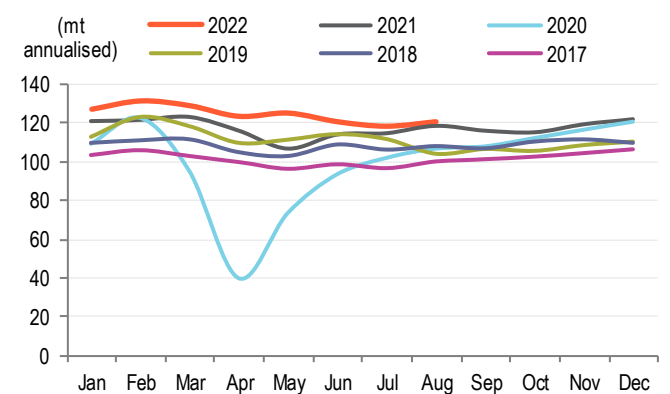
Source: Bloomberg, World Steel Association, BOBCAPS Research

Fig 36 – Asia ex-China production



Source: Bloomberg, World Steel Association, BOBCAPS Research

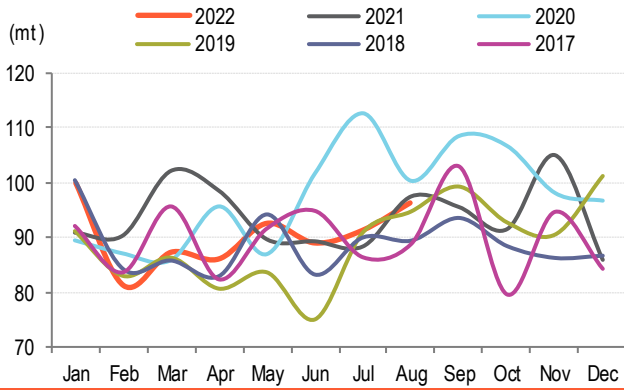
Fig 37 – India production



Source: CMIE, BOBCAPS Research

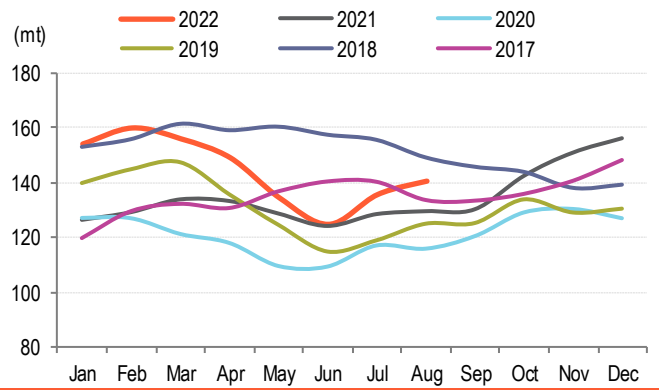
Iron ore imports/exports

Fig 38 – China iron ore imports



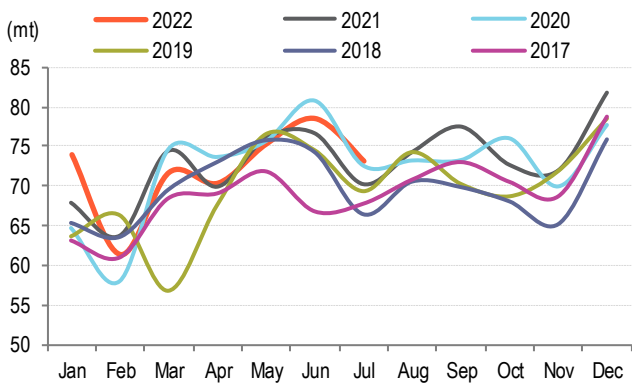
Source: Bloomberg, China Customs, BOBCAPS Research

Fig 39 – China iron ore port inventory



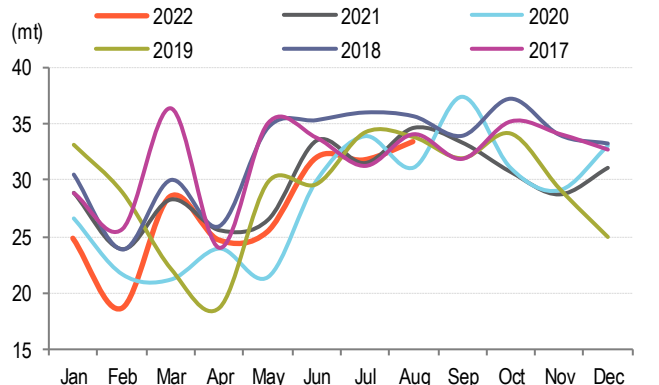
Source: Bloomberg, Steelhome, BOBCAPS Research

Fig 40 – Australia iron ore exports (monthly)



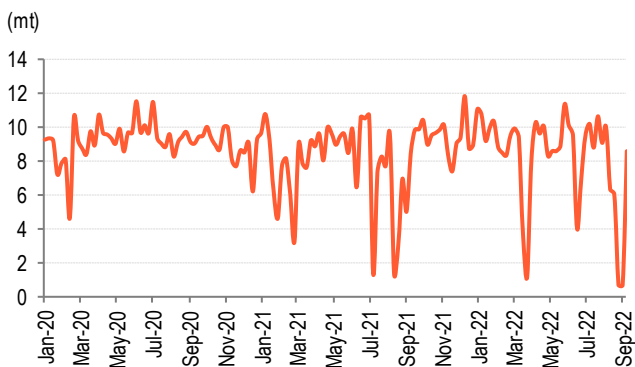
Source: Bloomberg, Australian Bureau of Statistics, BOBCAPS Research

Fig 41 – Brazil iron ore exports (monthly)



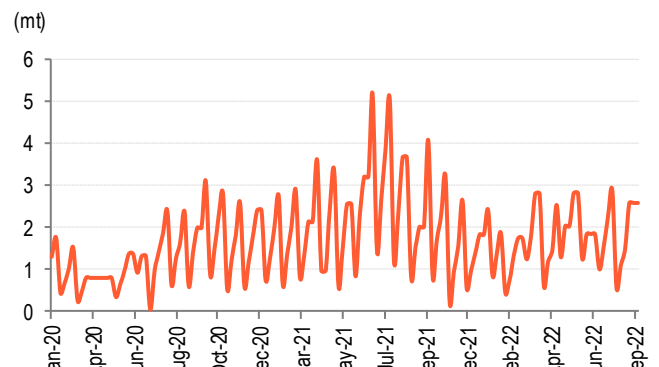
Source: Bloomberg, Brazil Ministry of Commerce, BOBCAPS Research

Fig 42 – Australia Port Headland iron ore exports (weekly)



Source: Bloomberg, Global Ports, BOBCAPS Research

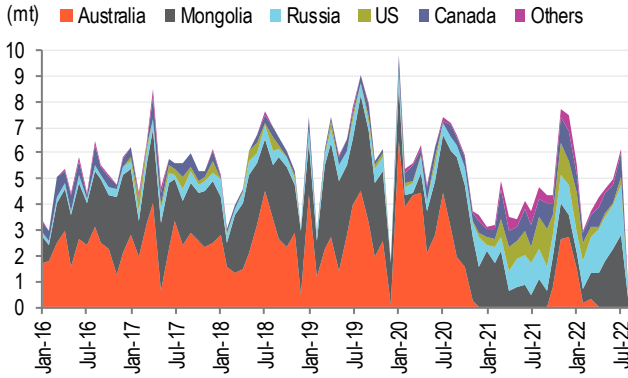
Fig 43 – Brazil iron ore exports (weekly)



Source: Bloomberg, Brazil Ministry of Commerce, BOBCAPS Research

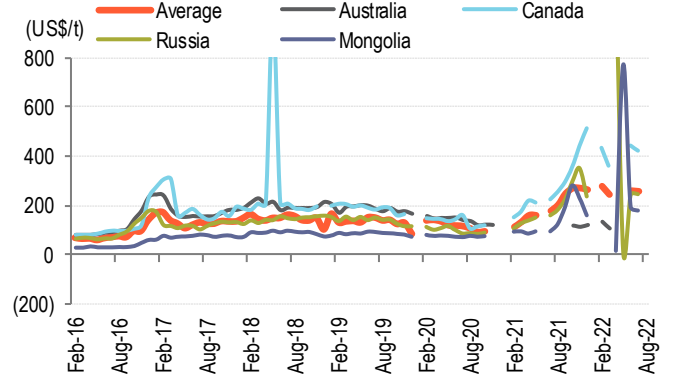
Coking coal

Fig 44 – China coking coal imports



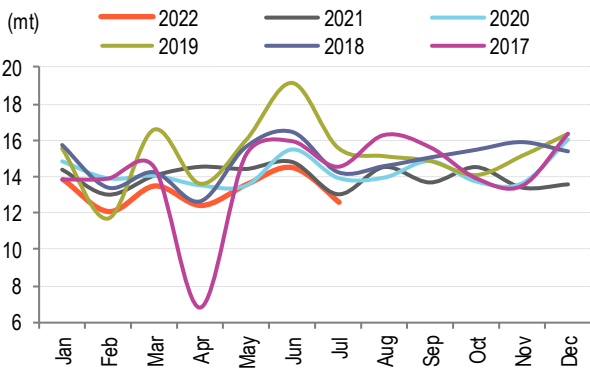
Source: Bloomberg, China Customs, BOBCAPS Research

Fig 45 – China coking coal import price



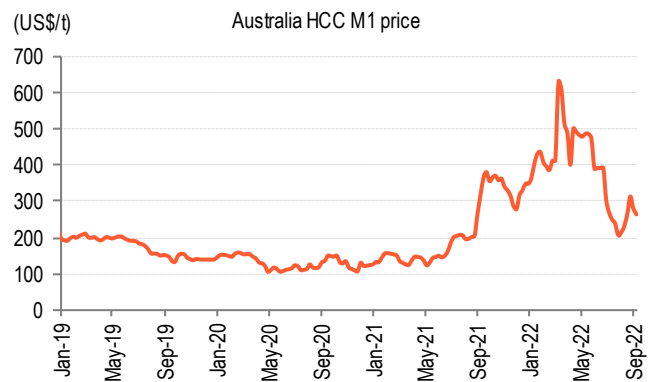
Source: Bloomberg, China Customs, BOBCAPS Research

Fig 46 – Australia coking coal exports



Source: Australian Bureau of Statistics, Bloomberg, BOBCAPS Research

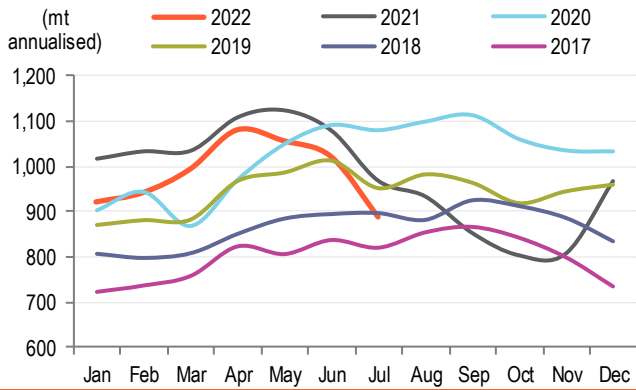
Fig 47 – Australia coking coal FOB price (monthly avg)



Source: SteelMint, BOBCAPS Research

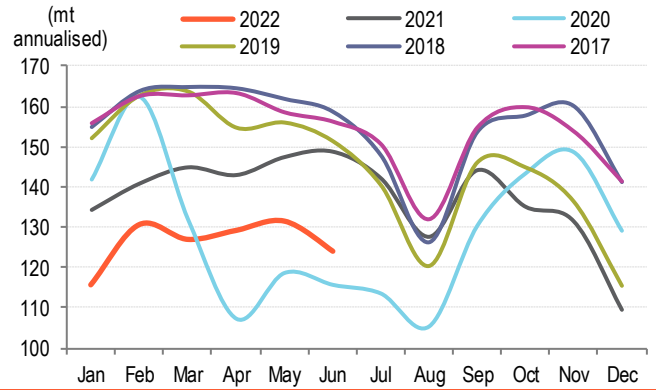
Apparent steel demand

Fig 48 – China



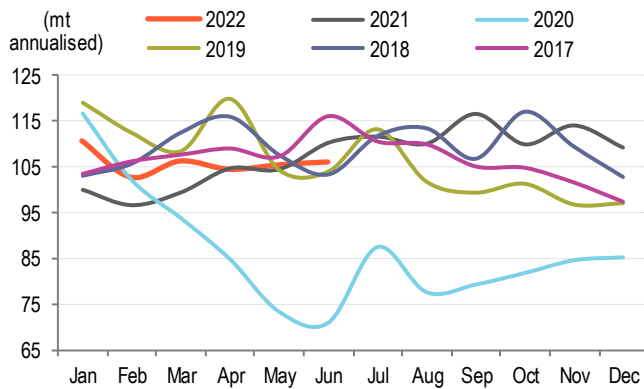
Source: Bloomberg, China Customs, National Bureau of Statistics, BOBCAPS Research

Fig 49 – Europe



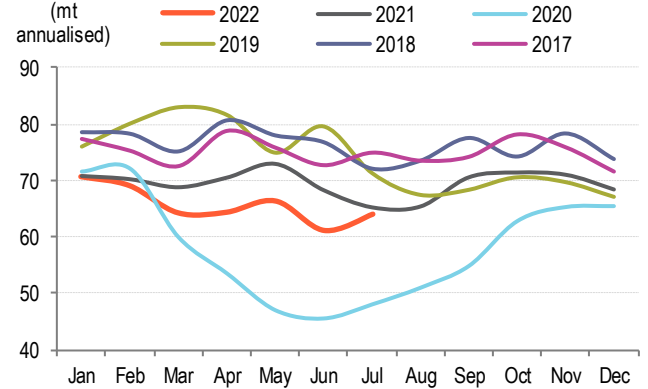
Source: Bloomberg, Eurofer, World Steel Association, BOBCAPS Research

Fig 50 – US



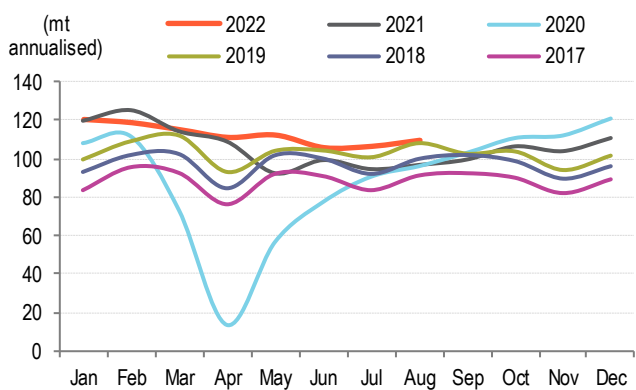
Source: Bloomberg, US Census Bureau, World Steel Association, BOBCAPS Research

Fig 51 – Japan



Source: Bloomberg, Ministry of Finance Japan, World Steel Association, BOBCAPS Research

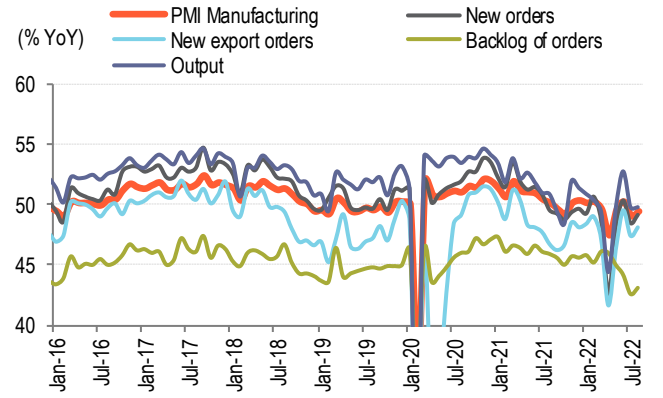
Fig 52 – India



Source: CMIE, BOBCAPS Research

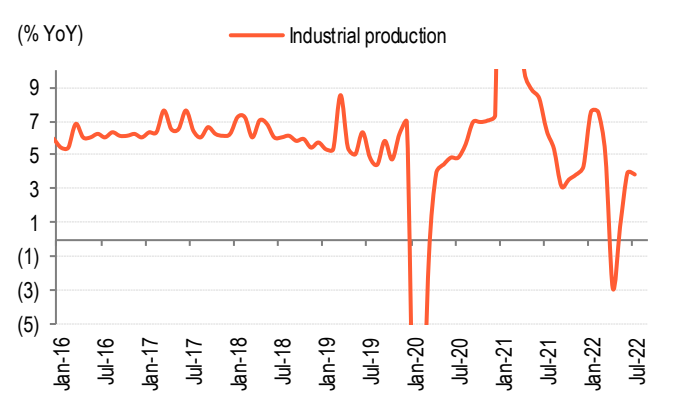
China demand indicators

Fig 53 – China manufacturing PMI



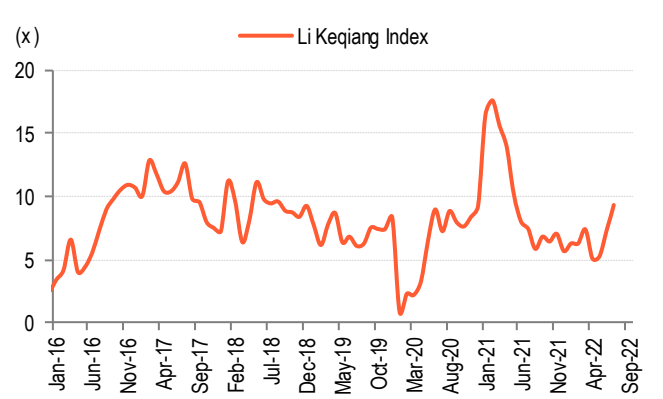
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 54 – China Industrial Production YTD growth



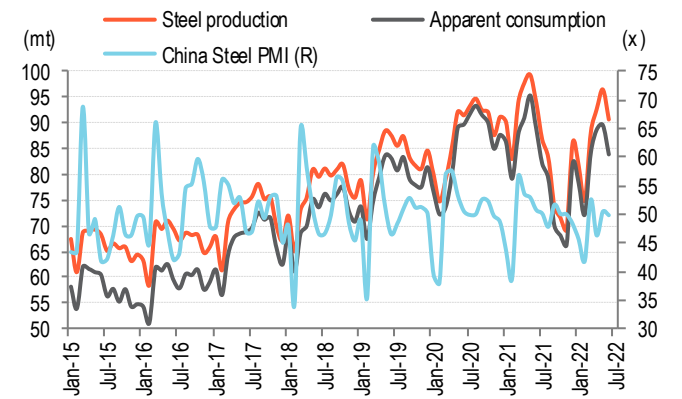
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 55 – China Li Keqiang Index (economy proxy)



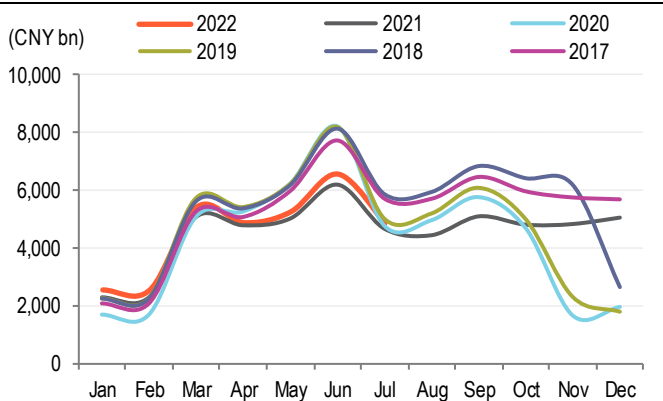
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research | FAI – Fixed Asset Investment

Fig 56 – China steel PMI



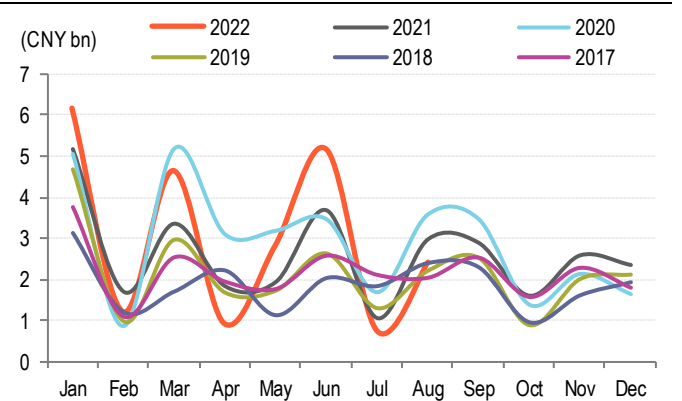
Source: Bloomberg, Steelhome, BOBCAPS Research

Fig 57 – China FAI ex-rural households



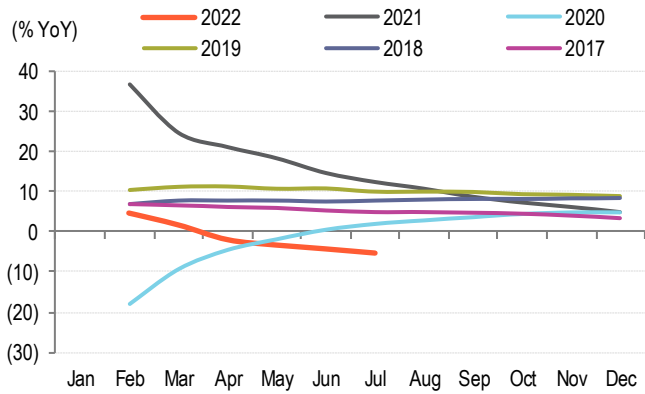
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research | FAI – Fixed Asset Investment

Fig 58 – China aggregate financing



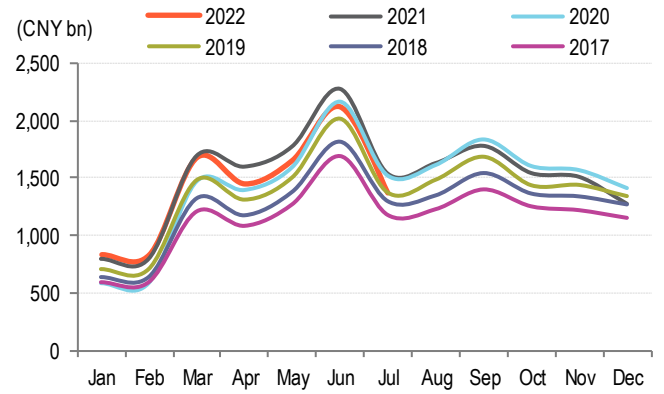
Source: Bloomberg, BOBCAPS Research

Fig 59 – China FAI real estate FAI, YTD growth



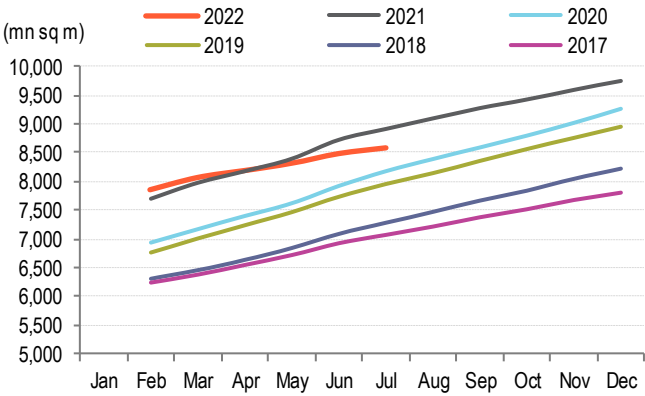
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 60 – China real estate FAI



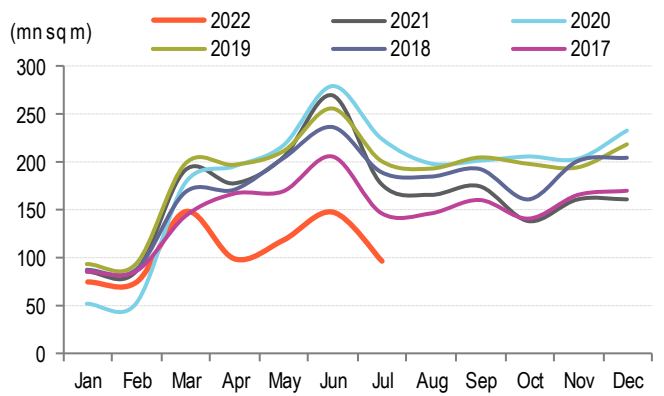
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 61 – Real estate floor space under construction



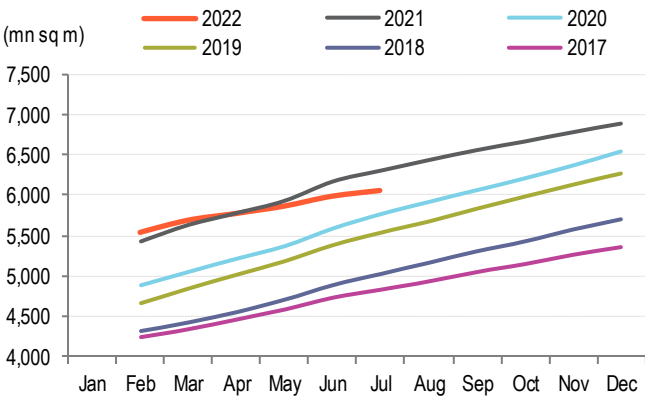
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 62 – Real estate floor space newly started



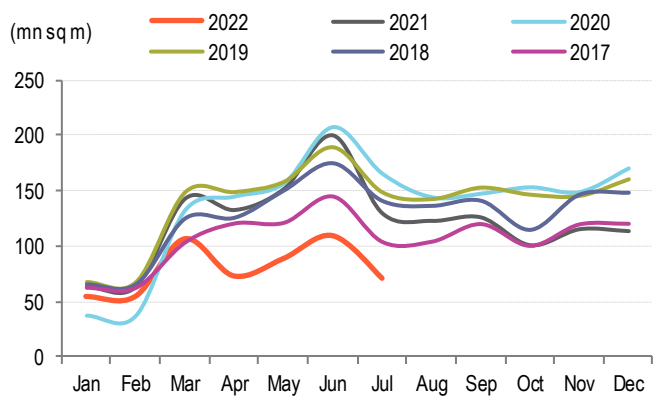
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 63 – Residential floor space under construction



Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 64 – Residential floor space newly started



Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

China property sector indicators

Fig 65 – Real estate – total funds cumulative

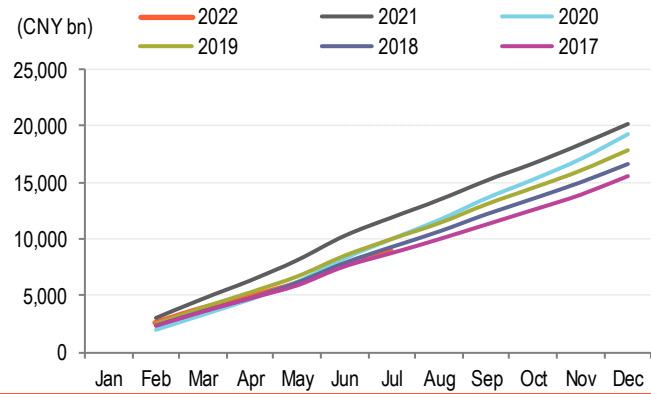


Fig 66 – Real estate – total funds monthly

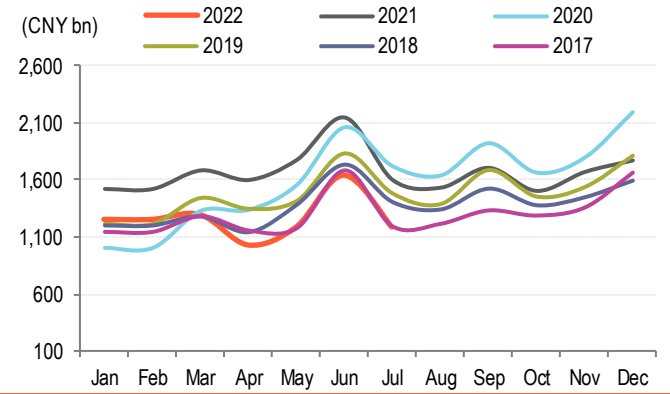


Fig 67 – Infrastructure FAI excluding electric power, heat power, gas and water, YTD growth

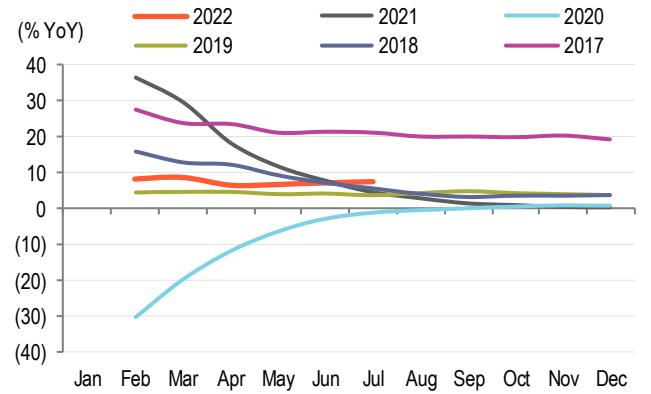


Fig 68 – Infrastructure FAI excluding electric power, heat power, gas and water

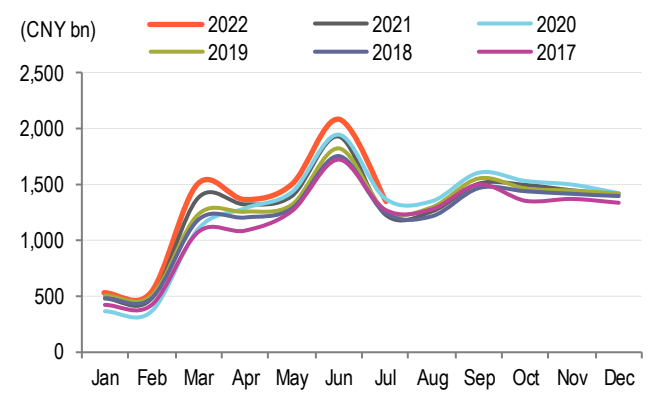


Fig 69 – Transport, storage, posts FAI

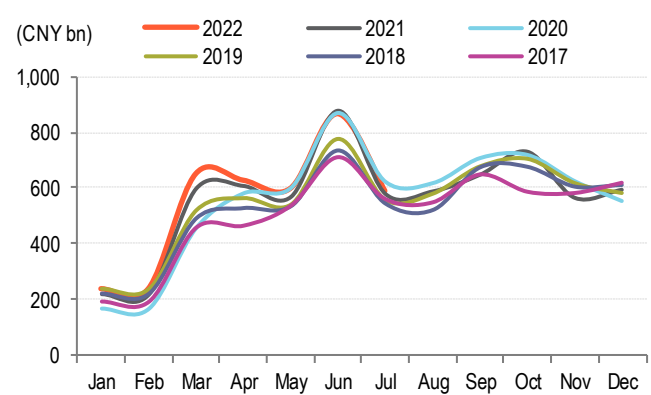
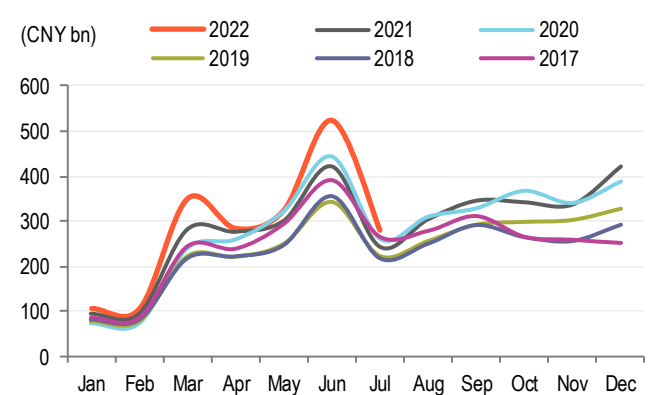
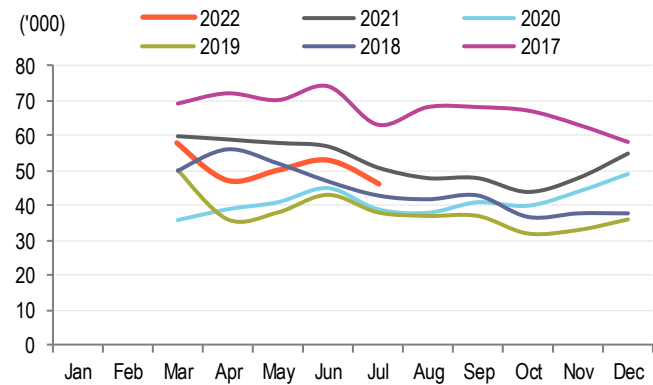


Fig 70 – Power, gas and water FAI



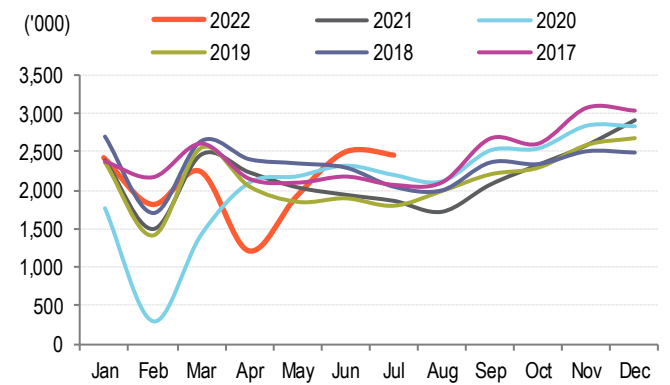
China downstream demand indicators

Fig 71 – Machinery: Metal cutting machine production



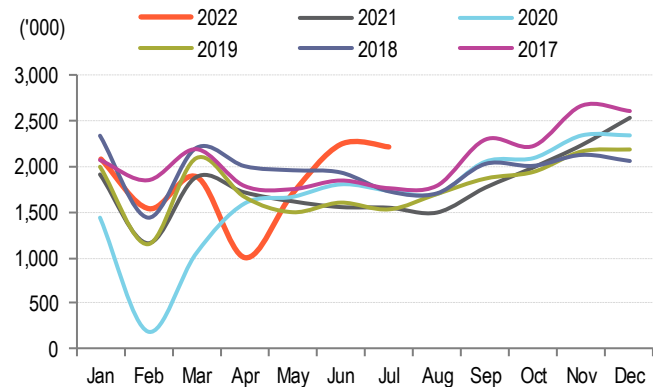
Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

Fig 72 – Automobiles: Vehicle production



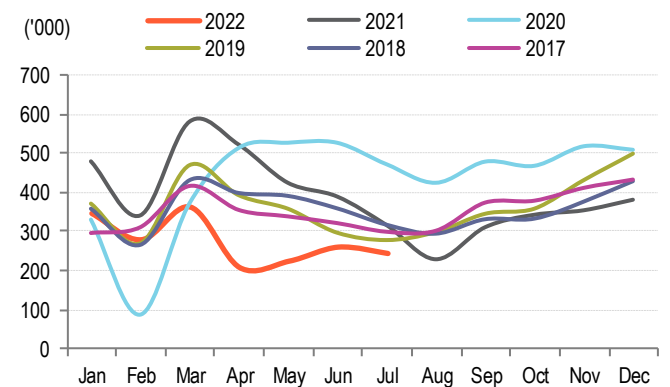
Source: Bloomberg, China Automotive Information Net, BOBCAPS Research

Fig 73 – Automobiles: Passenger vehicle production



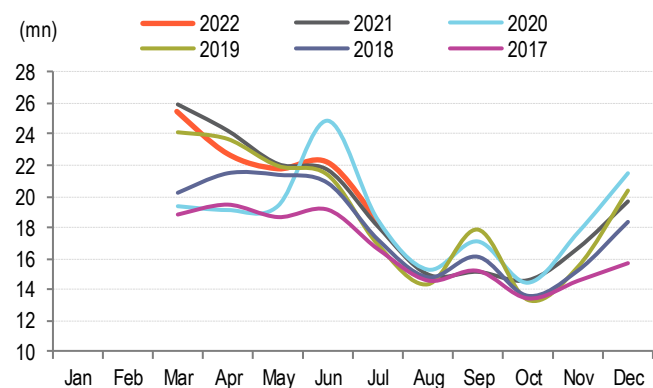
Source: Bloomberg, China Automotive Information Net, BOBCAPS Research

Fig 74 – Automobiles: Commercial vehicle production



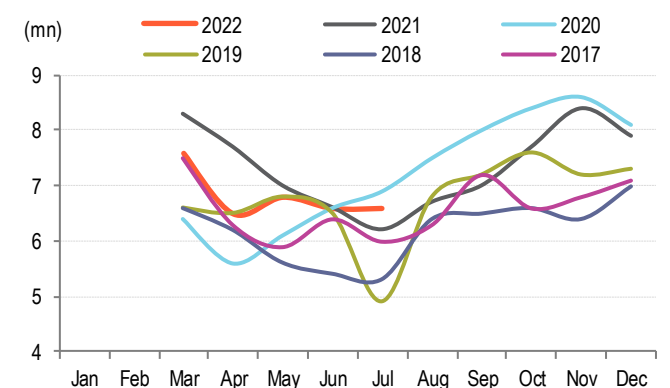
Source: Bloomberg, China Automotive Information Net, BOBCAPS Research

Fig 75 – Appliances: Air-conditioner production



Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

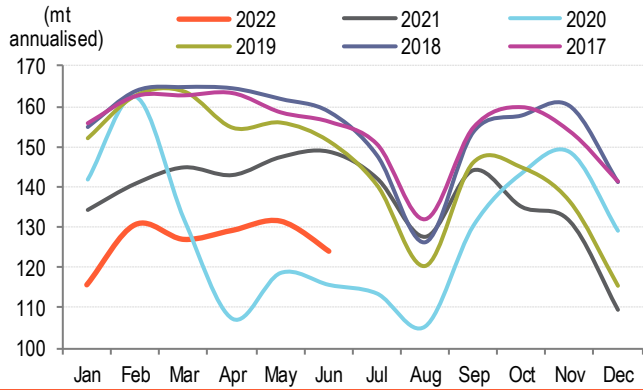
Fig 76 – Appliances: Washing machine production



Source: Bloomberg, National Bureau of Statistics, BOBCAPS Research

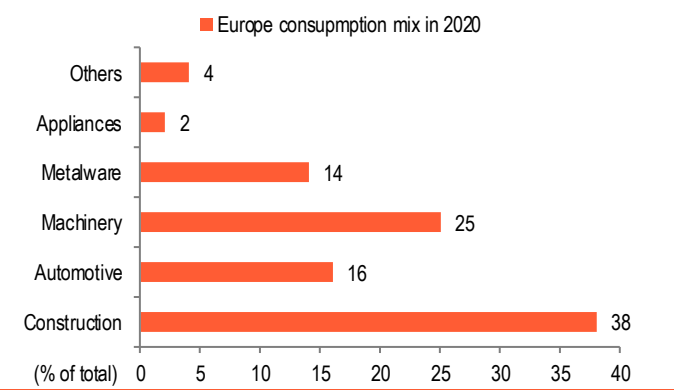
Europe: Steel demand indicators

Fig 77 – Europe apparent demand



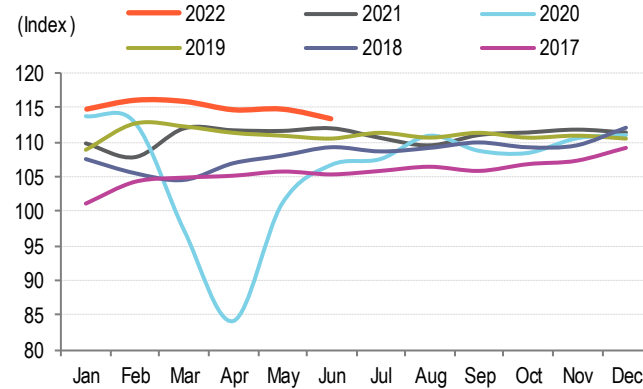
Source: Bloomberg, Eurofer, World Steel Association, BOBCAPS Research

Fig 78 – Europe demand break-up



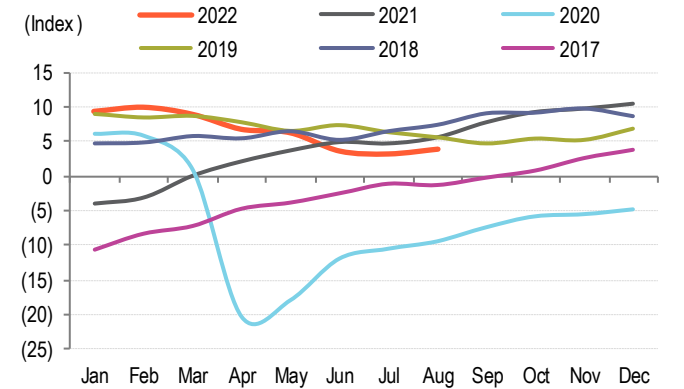
Source: Eurofer, BOBCAPS Research

Fig 79 – Europe construction index seasonally adjusted



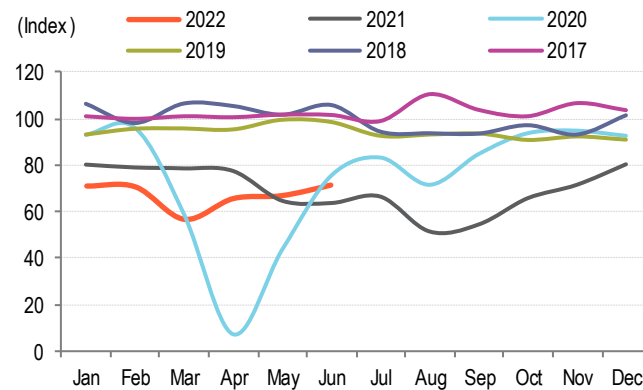
Source: Bloomberg, Eurostat, BOBCAPS Research ! SA – Seasonally adjusted

Fig 80 – Eurozone construction confidence indicator SA



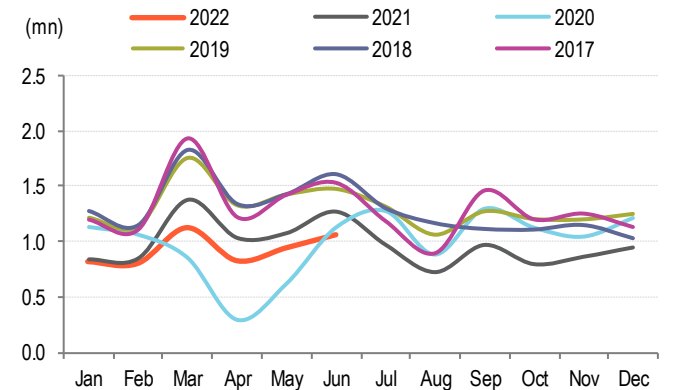
Source: Bloomberg, European Commission, BOBCAPS Research ! SA – Seasonally adjusted

Fig 81 – EU motor vehicle production index



Source: Bloomberg, Eurostat, BOBCAPS Research

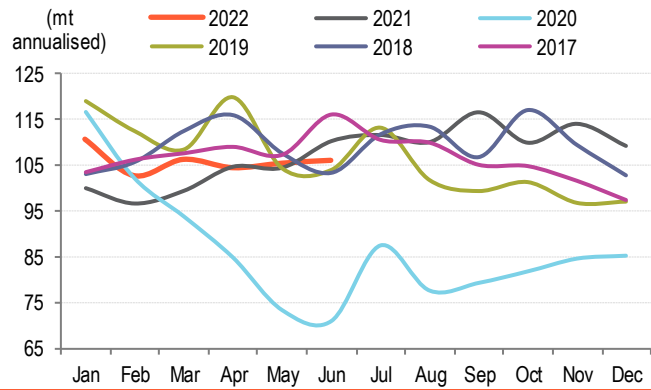
Fig 82 – Europe vehicle registration



Source: ACEA, Bloomberg, BOBCAPS Research

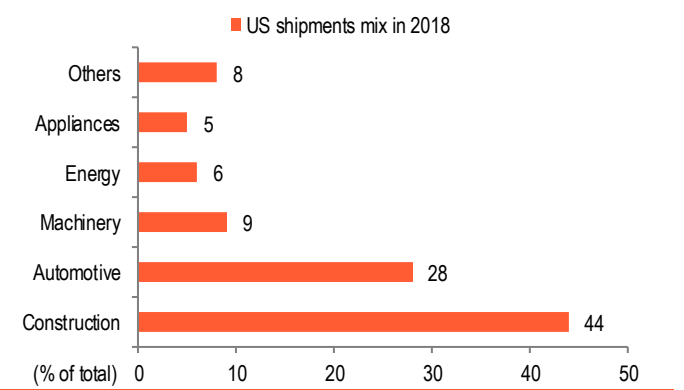
US steel demand indicators

Fig 83 – US apparent steel demand



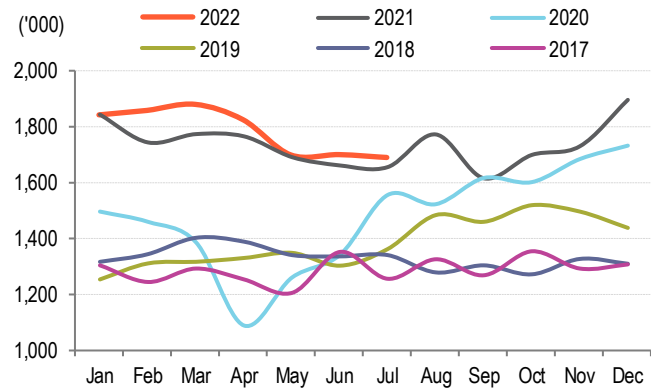
Source: Bloomberg, US Census Bureau, World Steel Association, BOBCAPS Research

Fig 84 – US steel shipments break-up (2018)



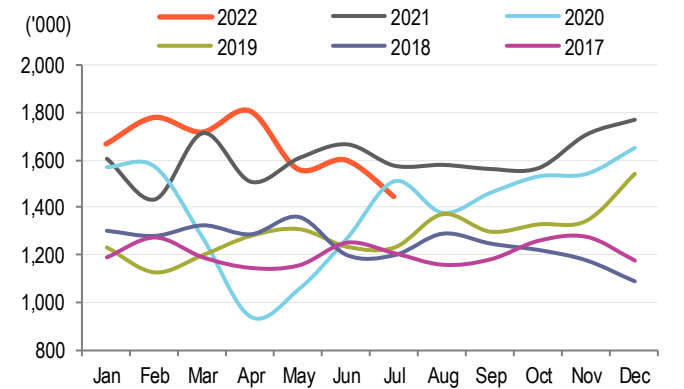
Source: AISI, BOBCAPS Research

Fig 85 – US housing permits



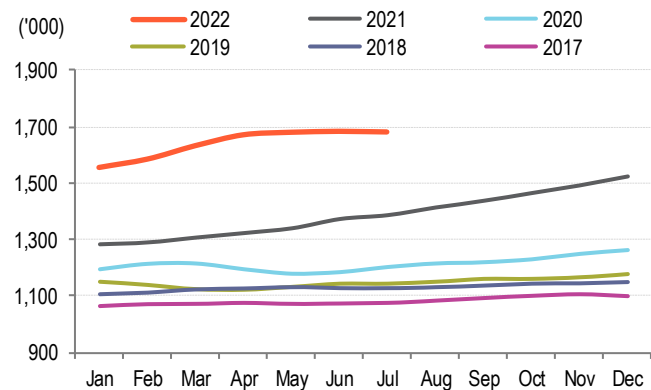
Source: Bloomberg, US Census Bureau, BOBCAPS Research

Fig 86 – US housing starts



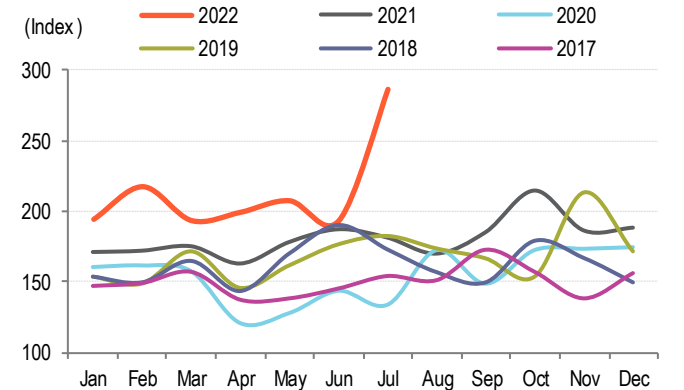
Source: Bloomberg, US Census Bureau, BOBCAPS Research

Fig 87 – US new homes under construction



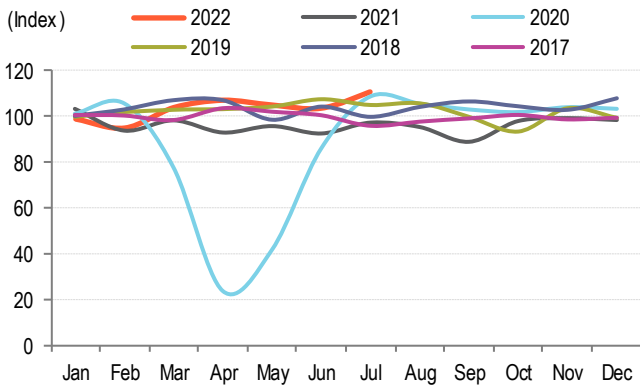
Source: Bloomberg, US Census Bureau, BOBCAPS Research

Fig 88 – US FW Dodge Construction Index



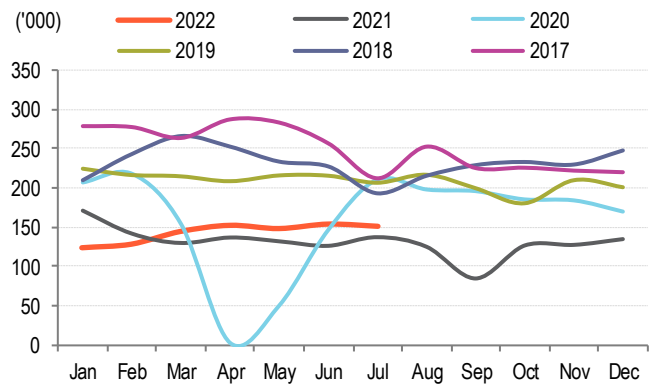
Source: Bloomberg, FW Dodge, BOBCAPS Research

Fig 89 – US motor vehicle and parts production manufacturing SA index



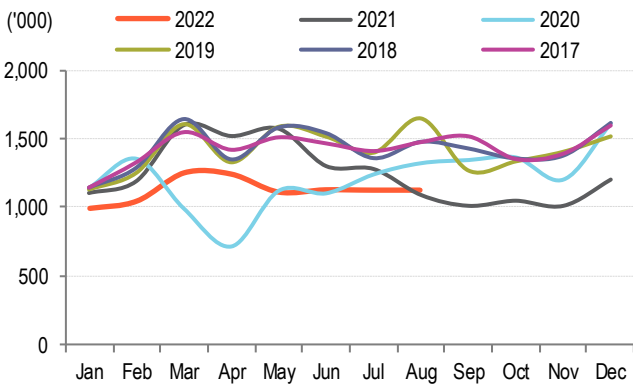
Source: Bloomberg, US Federal Reserve, BOBCAPS Research | SA – Seasonally adjusted

Fig 90 – US domestic auto production



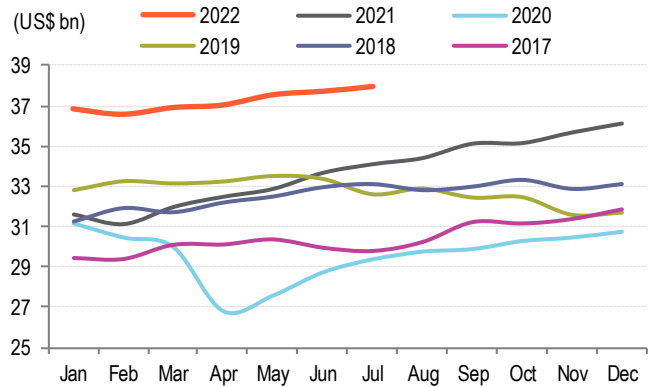
Source: Bloomberg, Bureau of Economics, BOBCAPS Research

Fig 91 – US truck and car vehicle sales



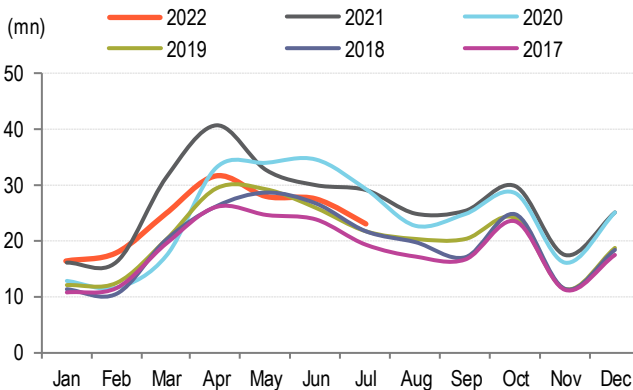
Source: Bloomberg, Bureau of Economics, BOBCAPS Research

Fig 92 – US machinery shipments



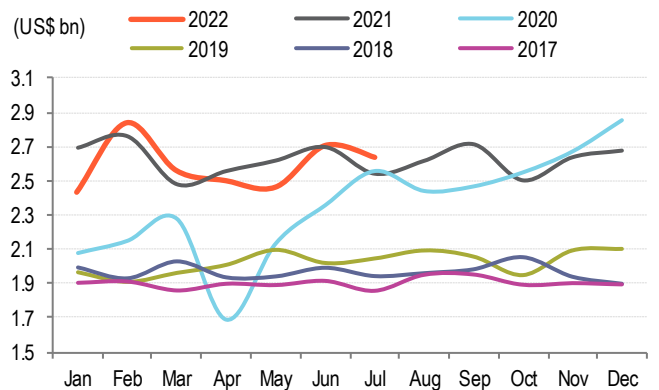
Source: Bloomberg, US Census Bureau, BOBCAPS Research

Fig 93 – US farm wheel tractor retail sales



Source: Association of Equipment Manufacturers, Bloomberg, BOBCAPS Research

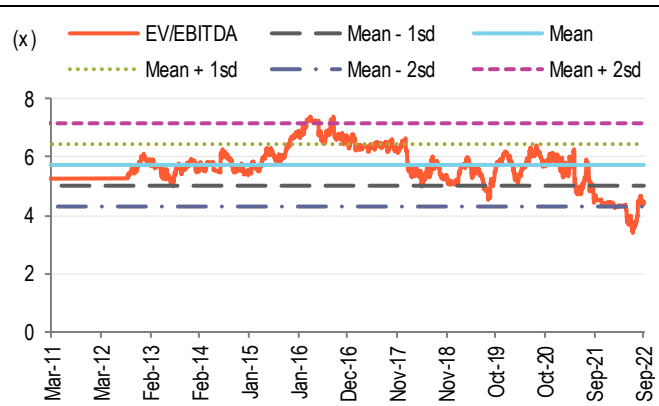
Fig 94 – US appliances new orders



Source: Bloomberg, US Census Bureau, BOBCAPS Research

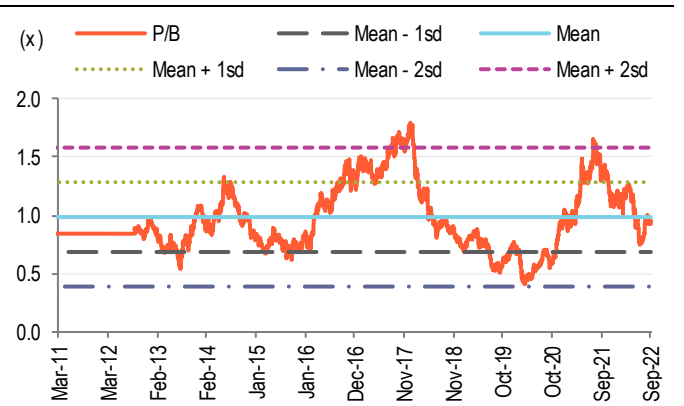
India steel sector valuations

Fig 95 – Tata Steel EV/EBITDA 2Y forward



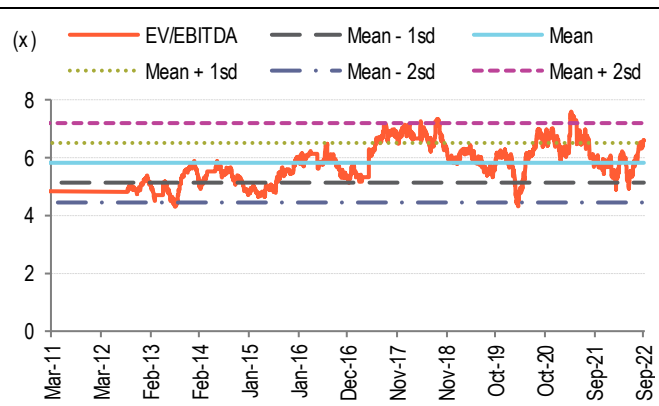
Source: Bloomberg, BOBCAPS Research

Fig 96 – Tata Steel P/B 1Y forward



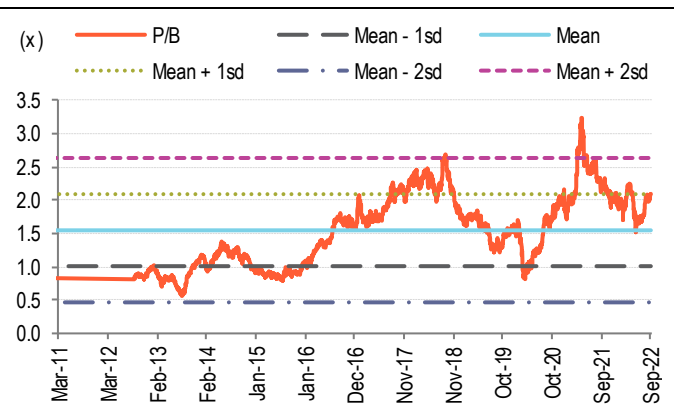
Source: Bloomberg, BOBCAPS Research

Fig 97 – JSW Steel EV/EBITDA 2Y forward



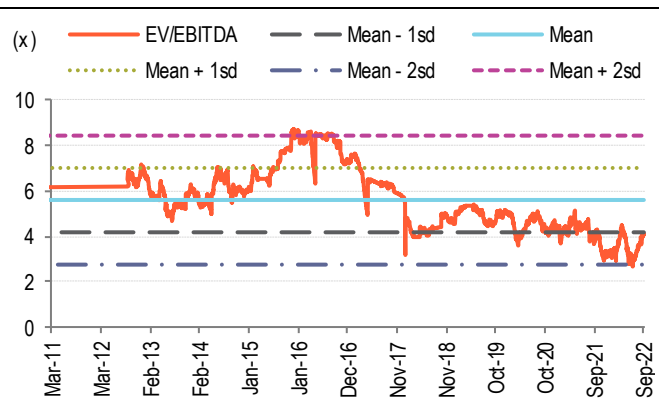
Source: Bloomberg, BOBCAPS Research

Fig 98 – JSW Steel P/B 1Y forward



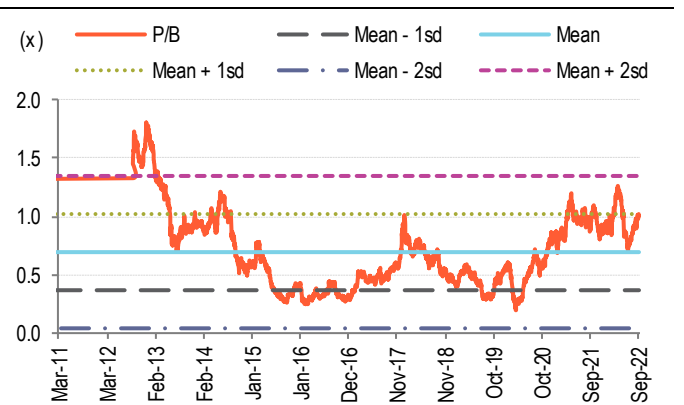
Source: Bloomberg, BOBCAPS Research

Fig 99 – Jindal Steel & Power EV/EBITDA 2Y forward



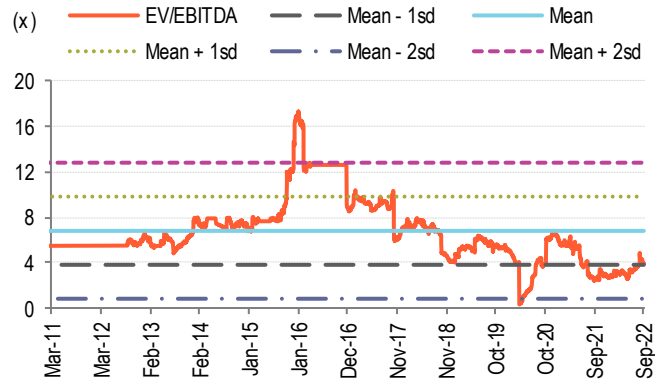
Source: Bloomberg, BOBCAPS Research

Fig 100 – Jindal Steel & Power P/B 1Y forward



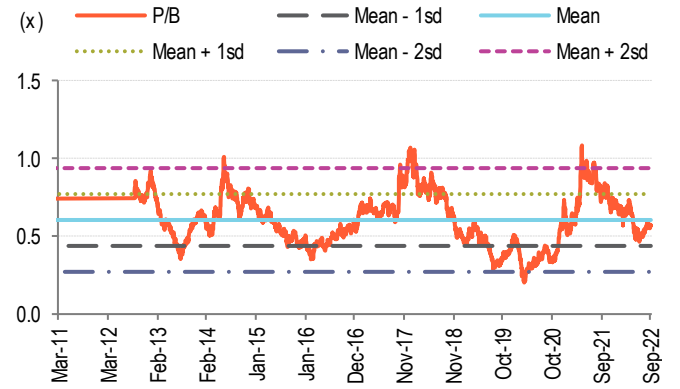
Source: Bloomberg, BOBCAPS Research

Fig 101 – SAIL EV/EBITDA 2Y forward



Source: Bloomberg, BOBCAPS Research

Fig 102 – SAIL P/B 1Y forward



Source: Bloomberg, BOBCAPS Research

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BUY – Expected return >+15%

HOLD – Expected return from -6% to +15%

SELL – Expected return <-6%

Note: Recommendation structure changed with effect from 21 June 2021

Our recommendation scale does not factor in short-term stock price volatility related to market fluctuations. Thus, our recommendations may not always be strictly in line with the recommendation scale as shown above.

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